MHC-3500

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

- MHC-3500 is composed of following models. As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME

AMPLIFIER	TA-H300
CASSETTE DECK	TC-H500
TUNER	ST-H300
SPEAKER SYSTEM	SS-H3500

PARTS LIST

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

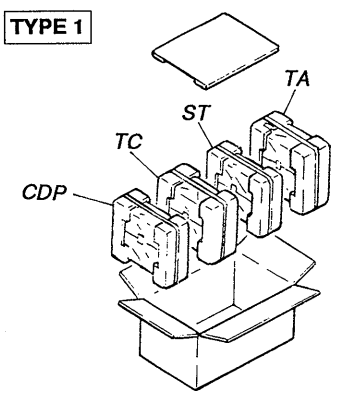
CND: Canadian model,
WG: West Germany model,
IT: Italian model

ACCESORY & PACKING MATERIAL

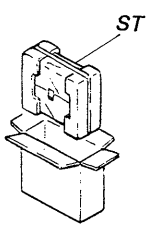
Part No.	Description
1-465-411-11	REMOTE COMMANDER(RM-S300)
1-501-224-00	(US, CND)...ANTENNA, FEEDER
1-501-369-11	(AEP, UK, WG, IT)...ANTENNA
1-501-374-11	ANTENNA, LOOP
1-557-954-21	(US, CND)...CORD, SPEAKER CONNECTION
1-575-667-11	CORD (WITH CONNECTOR)
*3-354-980-01	CUSHION(for TC-H500)
3-707-584-01	COVER, BATTERY(for RM-S300)
3-751-896-11	MANUAL, INSTRUCTION
3-751-896-41	(AEP)...MANUAL, INSTRUCTION
4-026-824-01	BAG, PROTECTION(for SS-H3500)
*4-857-137-01	CUSHION(for SS-H3500)
*4-932-847-01	CUSHION(R)(for TA-H300)
*4-932-848-01	CUSHION(L)(for TA-H300)
*4-932-849-01	CUSHION(for ST-H300)
*4-934-447-01	(US, CND, AEP:TYPE1, UK) ...INDIVIDUAL CARTON(for TA/ST/TC/CDP)
*4-934-448-01	(AEP:TYPE2, WG, IT) ...INDIVIDUAL CARTON(for TA/TC/CDP)
*4-934-468-01	INDIVIDUAL CARTON(for ST-H300)
*4-938-405-01	INDIVIDUAL CARTON(for SS-H3500)

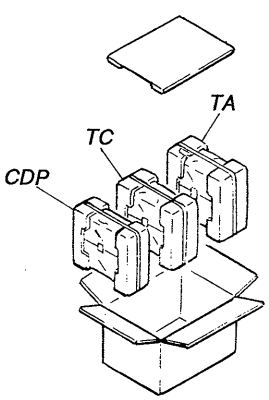
AEP MODEL PACKING FROM

TYPE 1



TYPE 2





MINI Hi-Fi COMPONENT SYSTEM

SONY®

English
90D0590-1
Printed in Japan

© 1990. 4

9-955-865-11

Sony Corporation
Audio Group

Published by Customer Relations and Service Group

SS-H3500

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

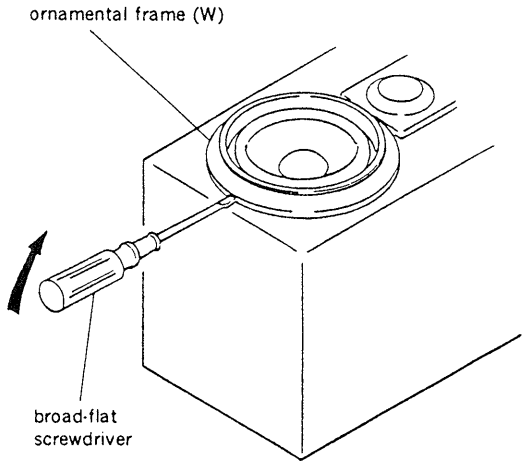
SPECIFICATIONS

Speaker system	3-way
Speaker units	Woofer:15cm(6 in.)cone type Tweeter:5cm(2 in.)cone type Super tweeter:2cm(13/16 in.) dome type
Power handling capacity	Maximum input power 45W
Sensitivity	88dB/W/m
Effective frequency range	45-20,000 Hz
Rated impedance	6 ohms
Dimensions	Approx.185x300x220mm (w/h/d) (7 3/8 x 11 7/8 x 8 3/4 inches)
Weight	Approx.3.3kg(7 lb 4 oz) net per speaker

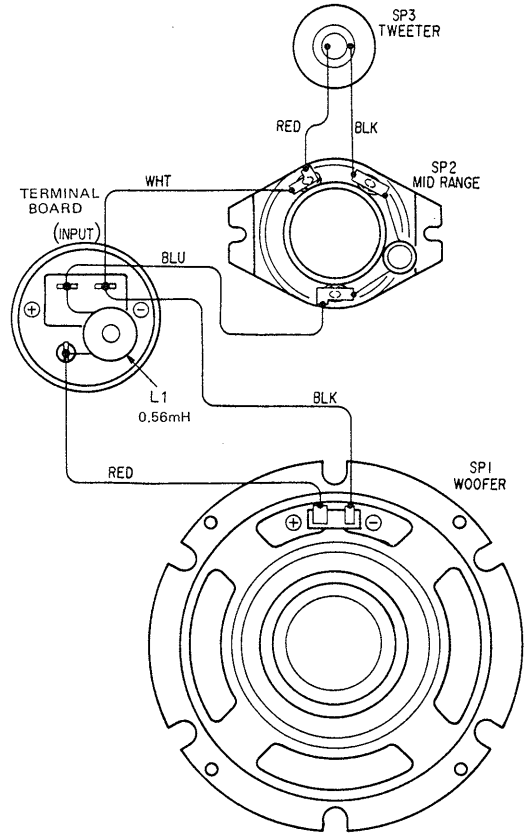
Design and specifications subject to change without notice.

This set is the speaker system in MHC-3500/5500 and FH-E828/E929.

1. ORNAMENTAL FRAME (W) REMOVAL



2. WIRING DIAGRAM



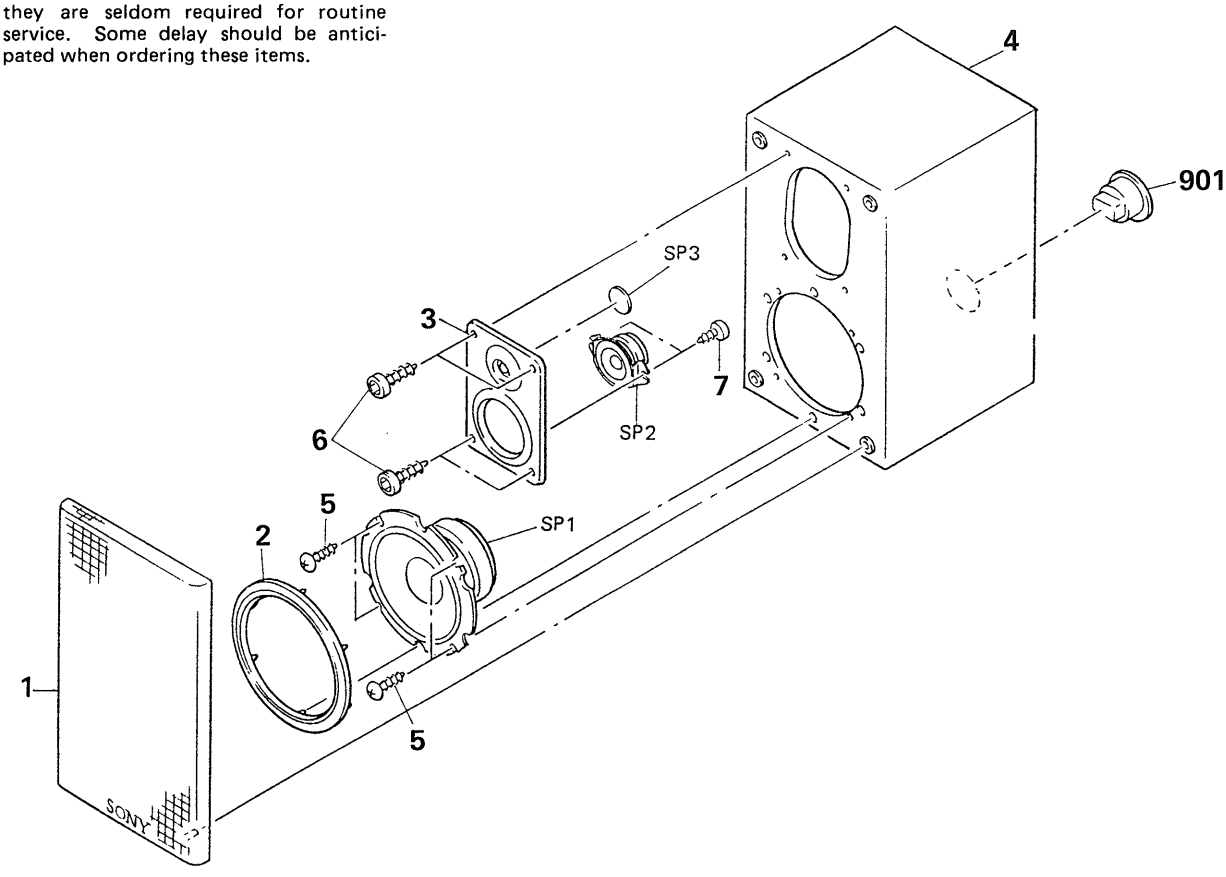
SPEAKER SYSTEM

SONY®

3. EXPLODED VIEW AND PARTS LIST

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



No.	Part No.	Description
1	X-4929-630-1	FRAME ASSY, GRILLE
2	4-929-680-01	FRAME(W), ORNAMENTAL
3	X-4929-631-3	FRAME ASSY, ORNAMENTAL
4	X-4929-632-1	CABINET ASSY, SPEAKER
5	4-874-614-11	SCREW(4)(3.5X14), TAPPING
6	4-932-425-01	SCREW(3.5X20), TAPPING
7	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3

ELECTRICAL PARTS

Ref.No.	Part No.	Description
901	1-537-145-11	TERMINAL BOARD
L 1	1-459-866-11	COIL, NETWORK (0.56MMH)
SP1	1-544-275-11	WOOFER
SP2	1-544-276-11	MID RANGE
SP3	1-544-293-11	TWEETER

ACCESSORY & PACKING MATERIAL

	1-575-495-11 (AEP)···	CORD,SPEAKER
	3-751-619-11 (AEP)···	MANUAL,INSTRUCTION
	*4-857-137-01	CUSHION
	*4-938-405-01 (AEP)···	INDIVIDUAL CARTON

9-955-844-11

Sony Corporation
Audio Group

English
90D06100-1
Printed in Japan
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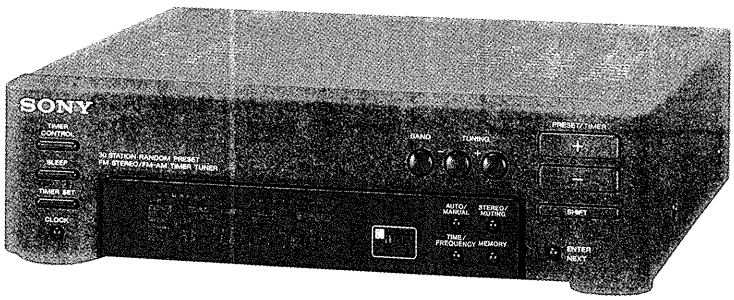
Published by Customer Relations and Service Group

ST-H300

SERVICE MANUAL

AEP Model
UK Model



This set is the tuner section in MHC-3500.

SPECIFICATIONS

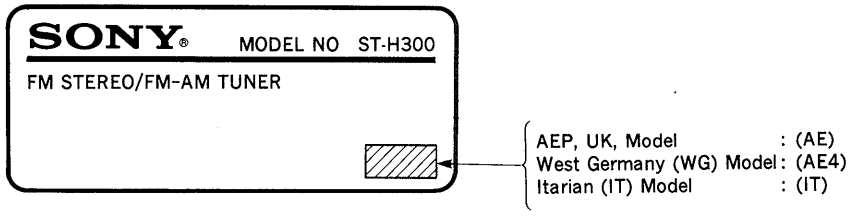
System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 – 108 MHz
Antenna	Telescopic antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	MW: 522 – 1,611 kHz, LW 144 – 288 kHz (Italian model) MW: 531 – 1,602 kHz, LW: 153 – 279 kHz (except Italian model)
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

FM-AM TIMER TUNER

SONY®

MODEL IDENTIFICATION

—Model Number Label—



- **Power supply for service**

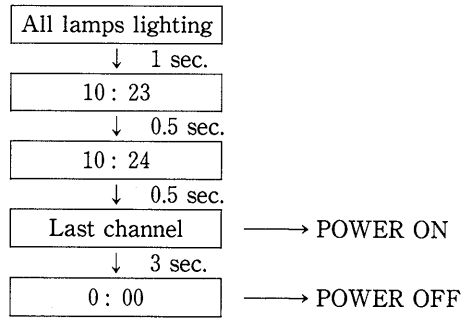
Since this machine has no power source in itself, the power is supplied form AMP TA-H300 used for this series. As shown in the following table, this machine requires 4types of voltage, and supplying each type of voltage separately makes complicated connections.

Accordingly, make connection with TA-H300 at time of service, such as electrifying repair.

AC 3.9V	FL-tube filament voltage
DC −24V	Display controller IC701, grid voltage
DC 5V	Display controller IC701, V_{CC}
DC 13V	PLL control voltage

- **Service mode for checking the timer ON/OFF**

1) Connect with AMP TA-H300 and set the power switch of TA-H300 to the state of STANDBY.
2) Set the time of tuner to a proper time (any time).
3) Press 3 switches simultaneously, namely, TUNING −, SHIFT and ENTER.
4) FL-tube display



5) End

—Caution for Service—

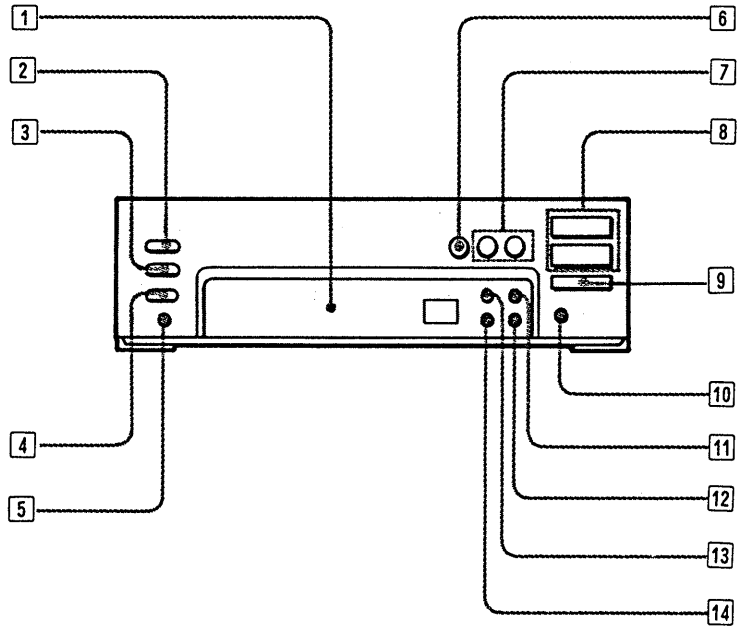
- **Reset of IC701**

The display controller IC701 is reset by short-circuiting both edges of C702 (0.47μF) while power OFF and discharging electricity.
After resetting, the following frequencies are pre-set to the memory.
When the repair is completed, return the memory to the preceding state (content).

FM		AM/MW				LW			
		AEP, UK modol		WG, Italian model		AEP, UK model		WG, Italian model	
A1	87.5 MHz	A6	531 kHz	A6	522 kHz	B1	153 kHz	B1	144 kHz
A2	88.0 MHz	A7	603 kHz	A7	603 kHz	B2	171 kHz	B2	162 kHz
A3	98.0 MHz	A8	999 kHz	A8	999 kHz	B3	216 kHz	B3	216 kHz
A4	100.0 MHz	A9	1404 kHz	A9	1404 kHz	B4	261 kHz	B4	270 kHz
A5	108.0 MHz	A0	1602 kHz	A0	1611 kHz	B5	281 kHz	B5	288 kHz

SECTION 1
GENERAL

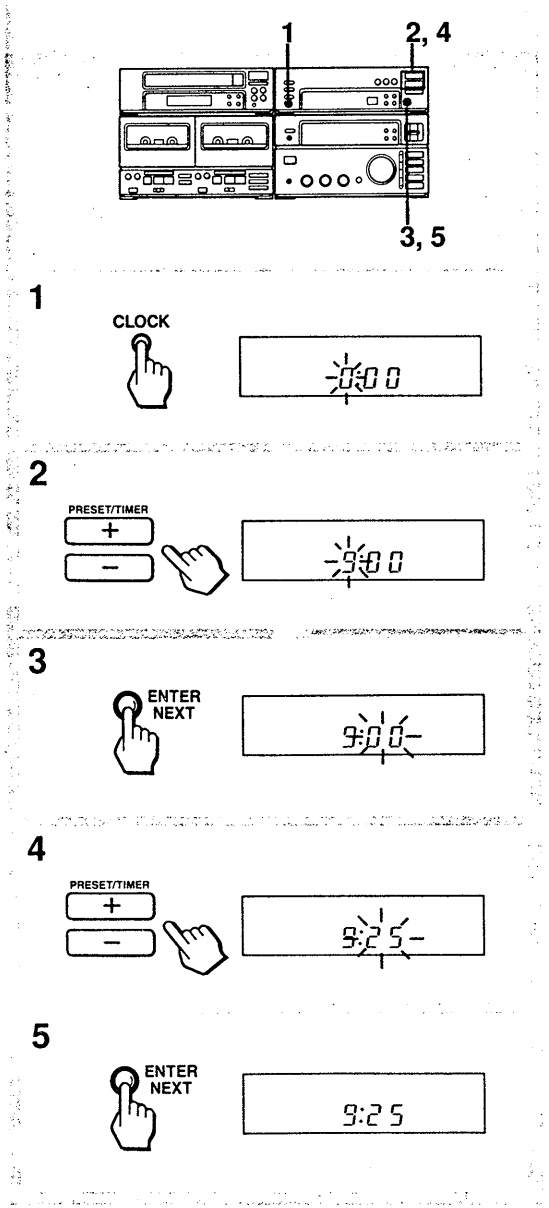
1-1. PARTS IDENTIFICATION



Tuner Section

1. Display window
2. TIMER CONTROL button
3. SLEEP timer button
4. TIMER SET button
5. CLOCK button
6. BAND selector
7. TUNING/–/+ buttons
8. PRESET/TIMER –/+ buttons.
9. SHIFT (memory page select) button
10. ENTER/NEXT button
11. STEREO/MUTING button
12. MEMORY button
13. AUTO/MANUAL tuning button
14. TIME/FREQUENCY button
15. Remote control sensor

1-2. CLOCK SETTING



Setting the Clock

Example: Set to 9:25 in the morning.

1 **Press CLOCK.**

2 **Set the hour with PRESET/TIMER +/- buttons**

3 **Press ENTER/NEXT.**

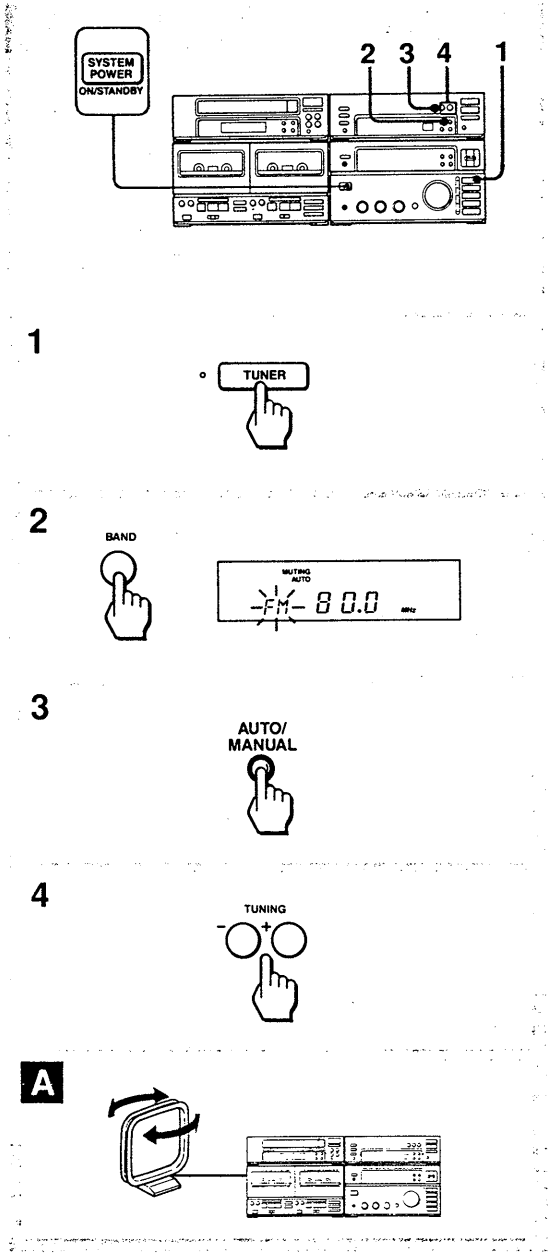
4 **Set the minute with PRESET/TIMER +/– buttons.**

5 **Press ENTER/NEXT.**
The clock starts operating.

When a power interruption occurs
The time will blink and the clock will be behind by the length of time of the power interruption. After the power is restored, the display must be reset to the proper time. (Timer setting is not cancelled by power interruption.)

To change the frequency display into the time display
Press TIME/FREQUENCY. Each time you press TIME/FREQUENCY, the display changes.

1-3. RADIO



The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

Tuning in Automatically

1 **Press TUNER.**

2 **Press BAND repeatedly until the desired band appears.**
As you press BAND, the band changes as follows: FM → MW → LW

3 **Press AUTO/MANUAL.**
Make sure that AUTO appears in the display.

4 **Tune in to the station with TUNING + or –.**

5 **For receiving FM stations with the stereo effect, press STEREO/MUTING so that MUTING appears.**

Tuning in Manually

1 **Press TUNER.**

2 **Select band by pressing BAND.**

3 **Press AUTO/MANUAL so that AUTO disappears from the display.**

4 **Tune in to the station with TUNING + or –.**

Indicator on the display

TUNED: Appears when a station of sufficient signal strength is tuned in.
STEREO: Appears when an FM stereo program of sufficient signal strength is received.

When an FM stereo program is noisy or hard to receive

Press STEREO/MUTING so that MUTING disappears from the display.
There will be no stereo effect, but the reception will be improved. Press again to restore the stereo effect.

Antenna adjustment A

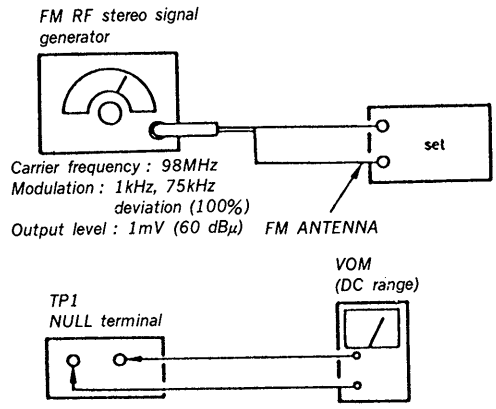
For MW and LW reception, find the best location for the AM loop antenna.

SECTION 2
ELECTRICAL ADJUSTMENTS

FM SECTION

• FM Discriminator Alignment (NULL check)

Setting :



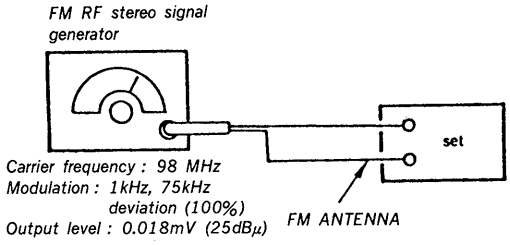
Procedure :

1. Tune the set to 98 MHz.
2. Adjust T21 for 0 V reading on the VOM.

Note : FM TUNING LEVEL adjustment should be made after FM discriminator alignment.

• FM TUNING LEVEL Adjustment

Setting :

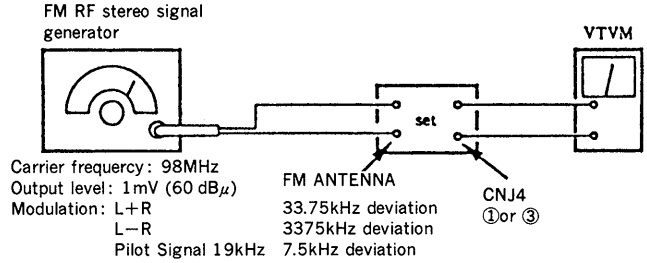

FM RF stereo signal generator
set
Carrier frequency : 98 MHz
Modulation : 1kHz, 75kHz deviation (100%)
Output level : 0.018mV (25dBμ)
FM ANTENNA

Procedure :

1. Tune the set to 98 MHz.
2. Adjust RV24 so that the TUNED LED goes on.

• FM Stereo Separation Adjustment

Setting :



Procedure :

Tune the set to 98 MHz

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

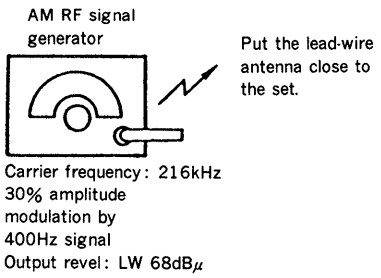
L-CH Stereo separation : Ⓐ—Ⓑ
R-CH Stereo separation : Ⓒ—Ⓓ

The separations of both channels should be equal.

AM SECTION

• AM TUNING LEVEL Adjustment

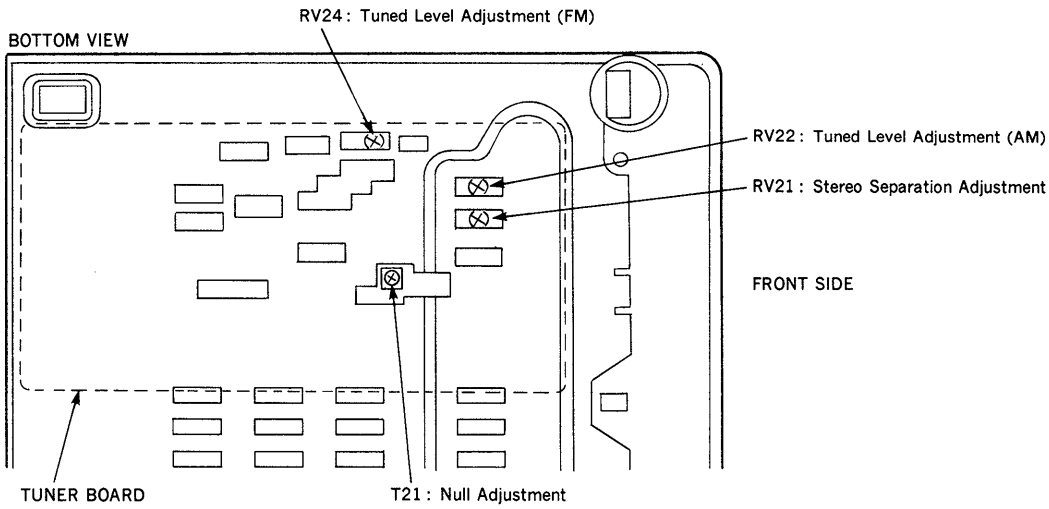
Setting :


AM RF signal generator
Put the lead-wire antenna close to the set.
Carrier frequency : 216kHz
30% amplitude modulation by 400Hz signal
Output revel : LW 68dBμ

Procedure :

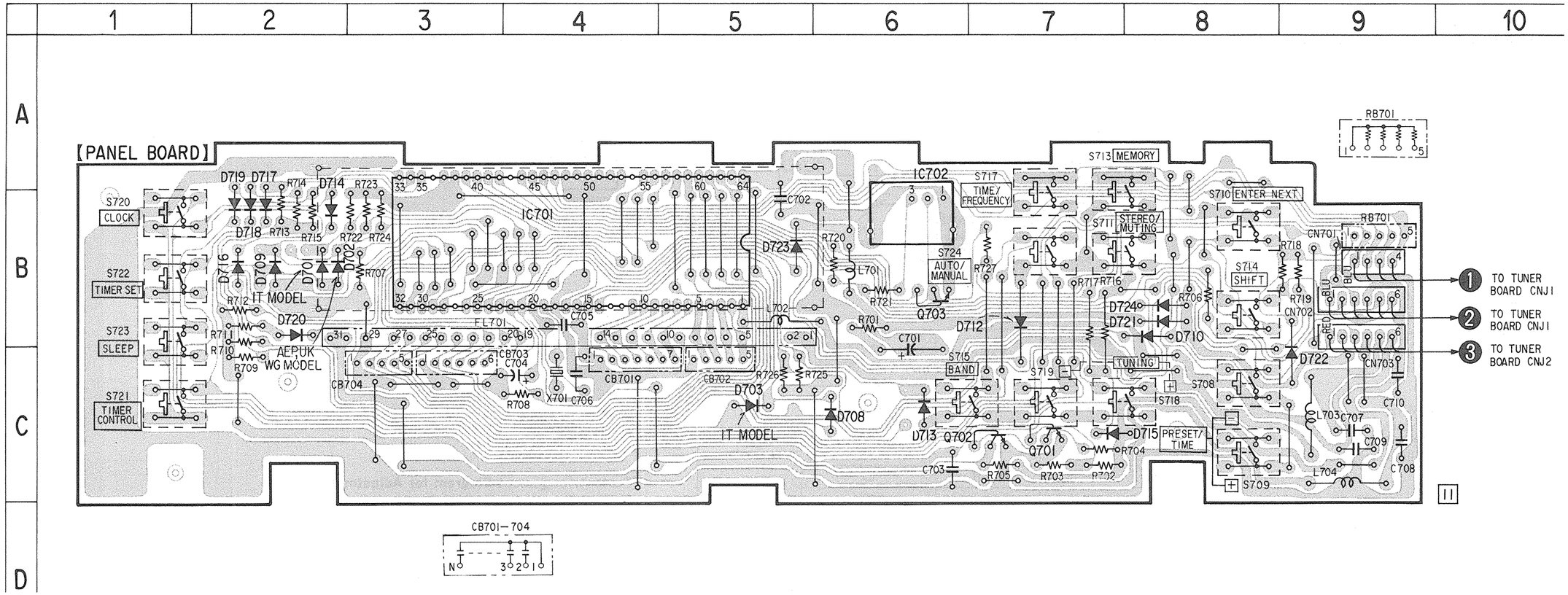
1. Tune the set to 216 kHz.
2. Adjust the RV22 so that the TUNED LED goes on.

[Parts Arrangement Diagram for Adjustments]



SECTION 3
DIAGRAMS

3-1. PRINTED WIRING BOARD—PANEL SECTION—



• Semiconductor Location

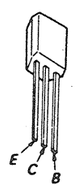
Ref. No.	Location
D701	B-2
D702	B-2
D703	C-5
D708	C-6
D709	B-2
D710	B-8
D712	B-7
D713	C-6
D714	B-2
D715	C-6
D716	B-2
D717	B-2
D718	B-2
D719	B-2
D720	B-2
D721	B-8
D722	C-9
D723	B-5
D724	B-8
IC701	B-4
IC702	B-6
Q701	C-1
Q702	C-7
Q703	B-6

Note:

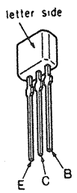
- ○—— : parts extracted from the component side.
- WG: West Germany Model
- IT: Itarian Model

3-2. SEMICONDUCTOR LEAD LAYOUTS

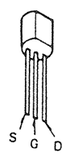
DTA114ES
DTC114ES
DTC144ES
2SC1317-SU
2SC2669-0Y
2SC3113-AB
2SC3330-T



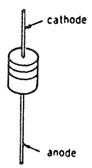
2SC2785-HFE



2SK246-GR3

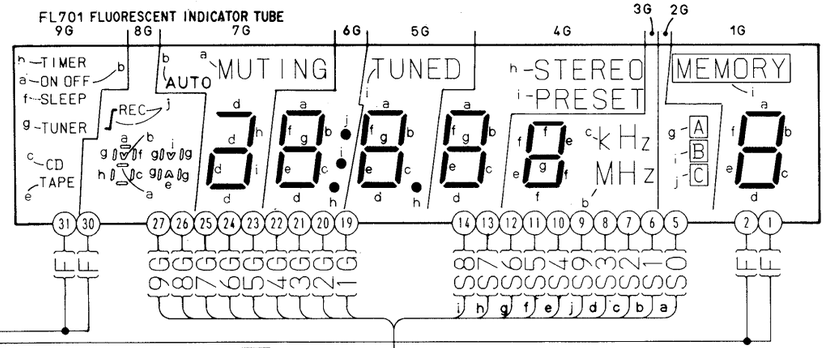


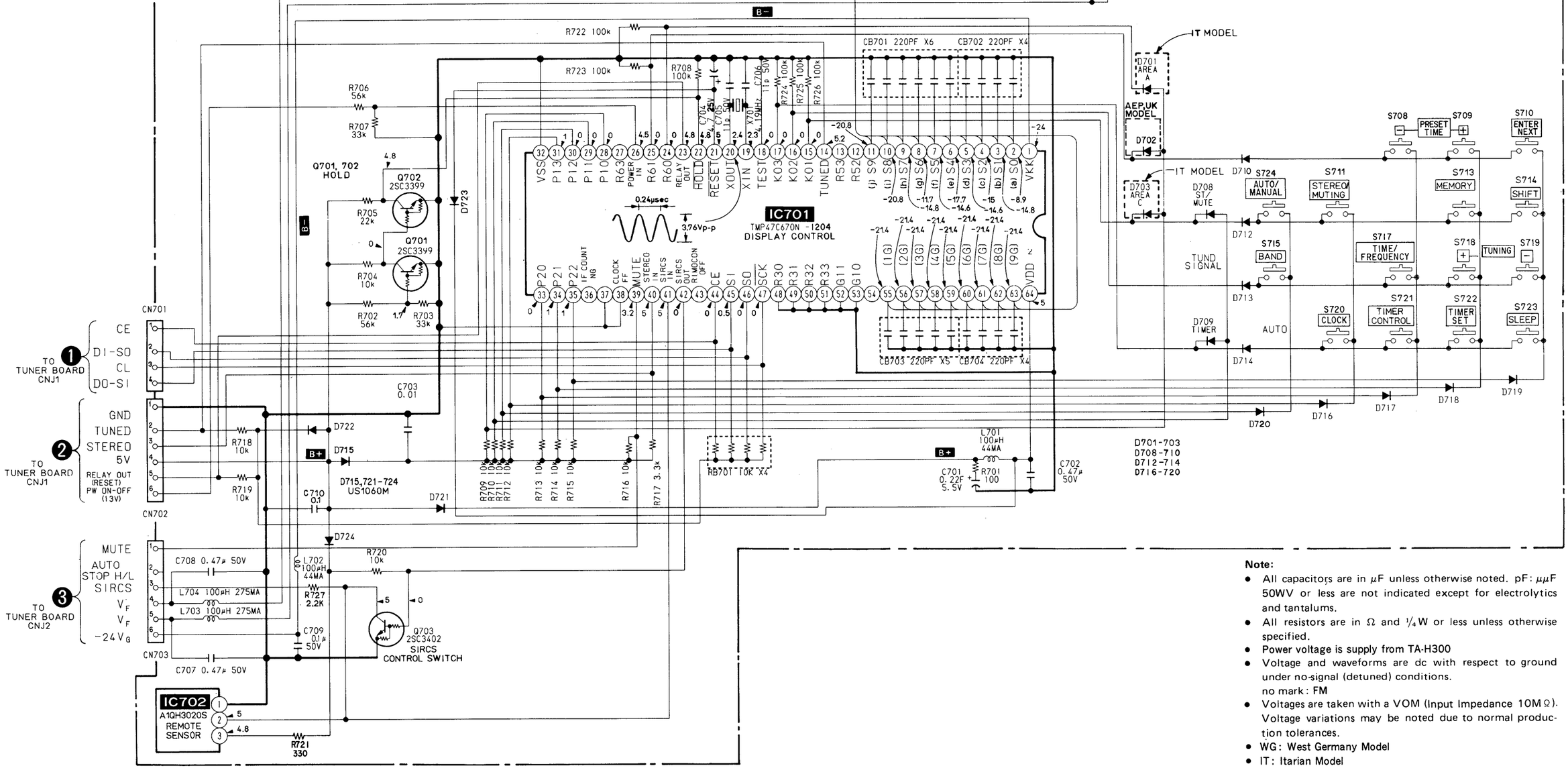
1SS120



【PANEL BOARD】

FL701 FLUORESCENT INDICATOR TUBE



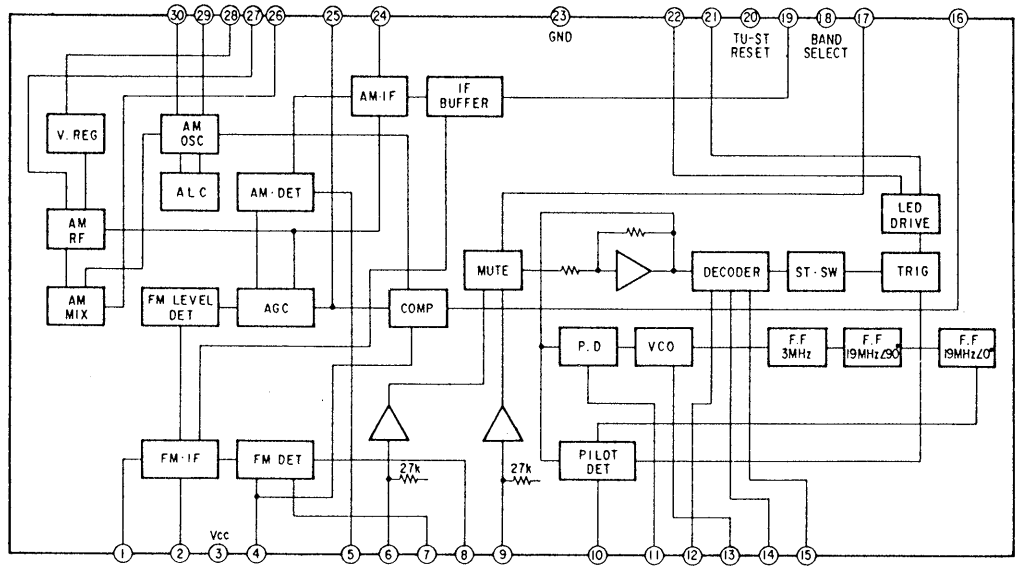


Note:

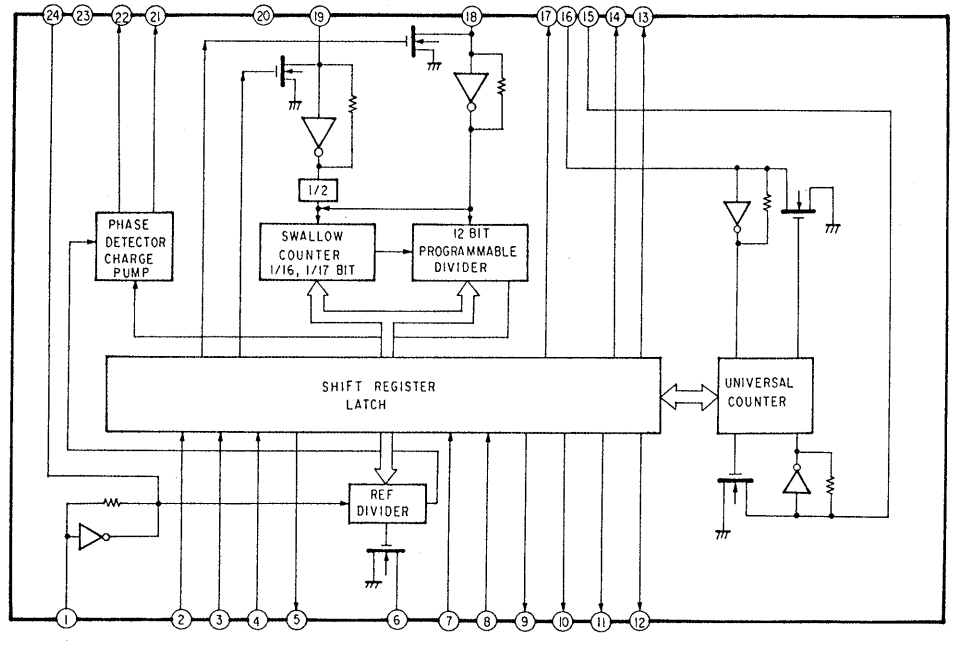
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Power voltage is supply from TA-H300
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- WG: West Germany Model
- IT: Itarian Model

• IC Block Diagrams

IC21 LA1858N

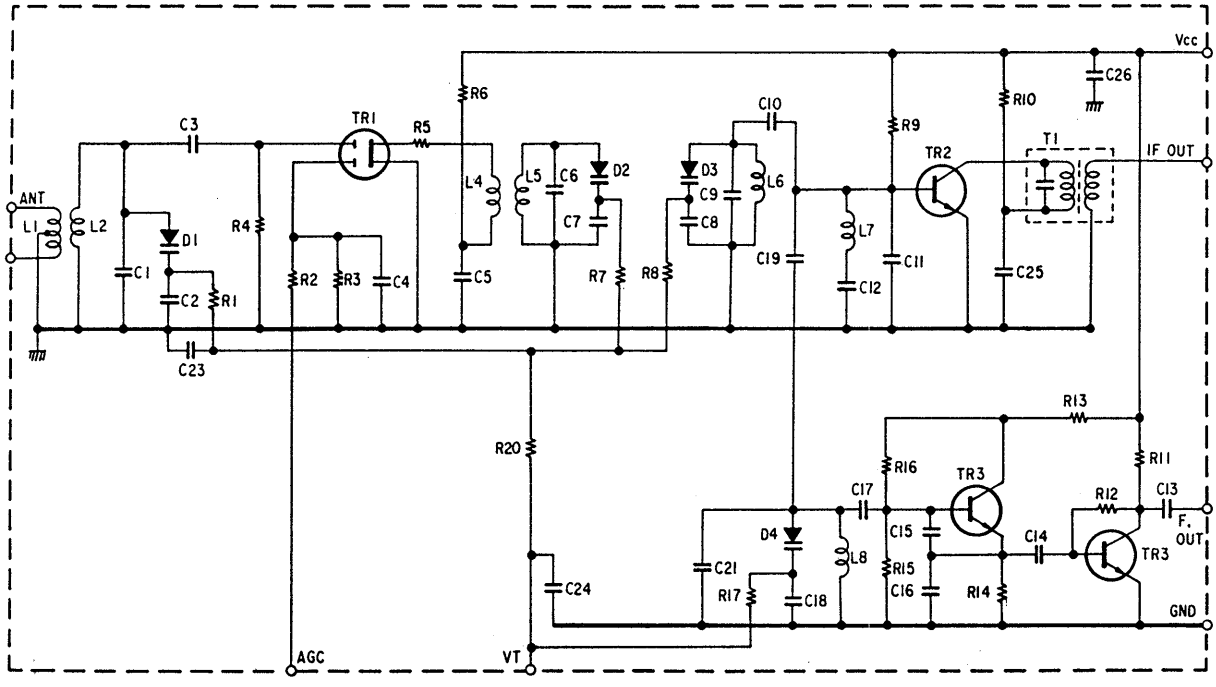


IC81 LC7218

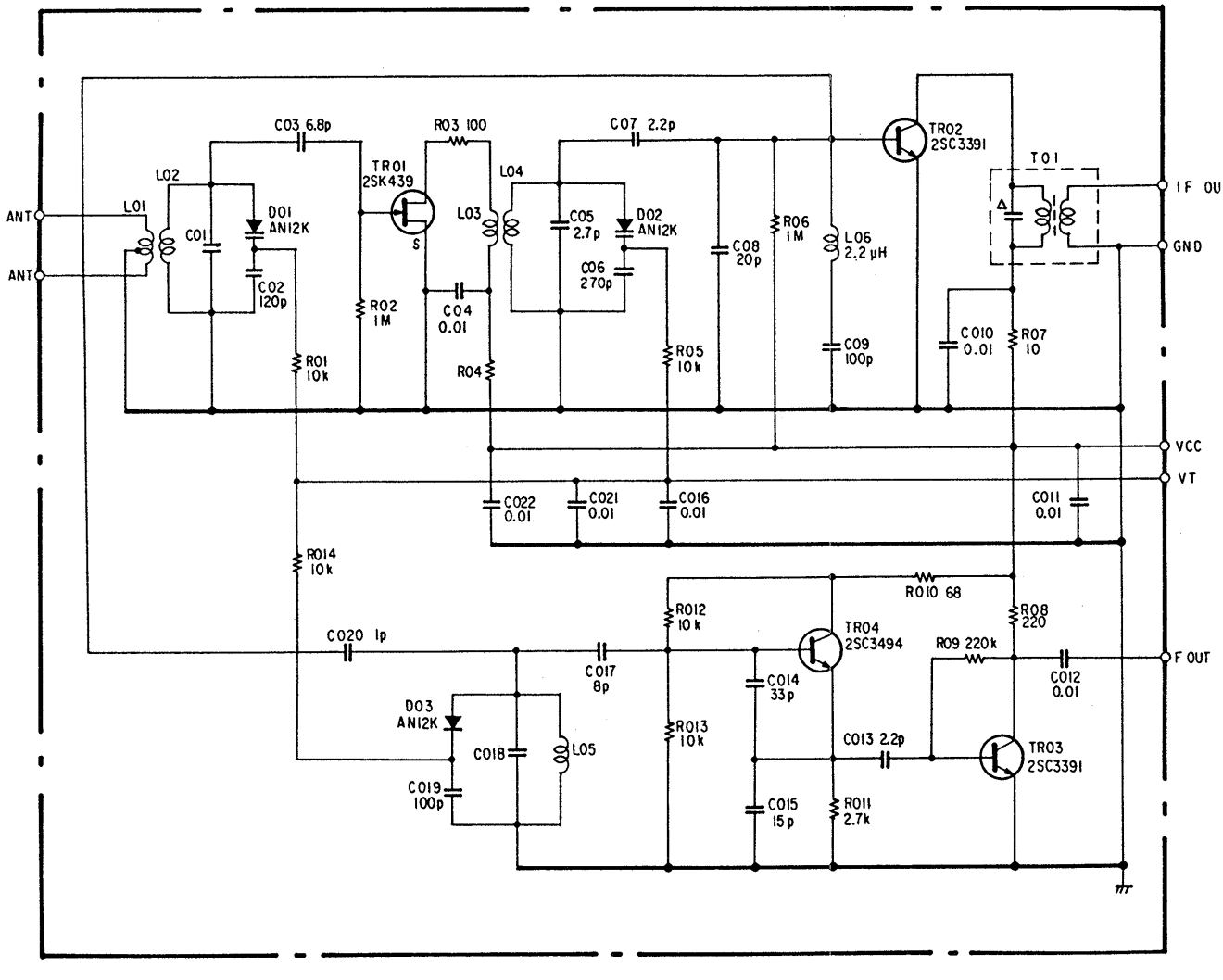


3-4. FM FRONT-END SCHEMATIC DIAGRAMS

FE1 (WG, IT Model)

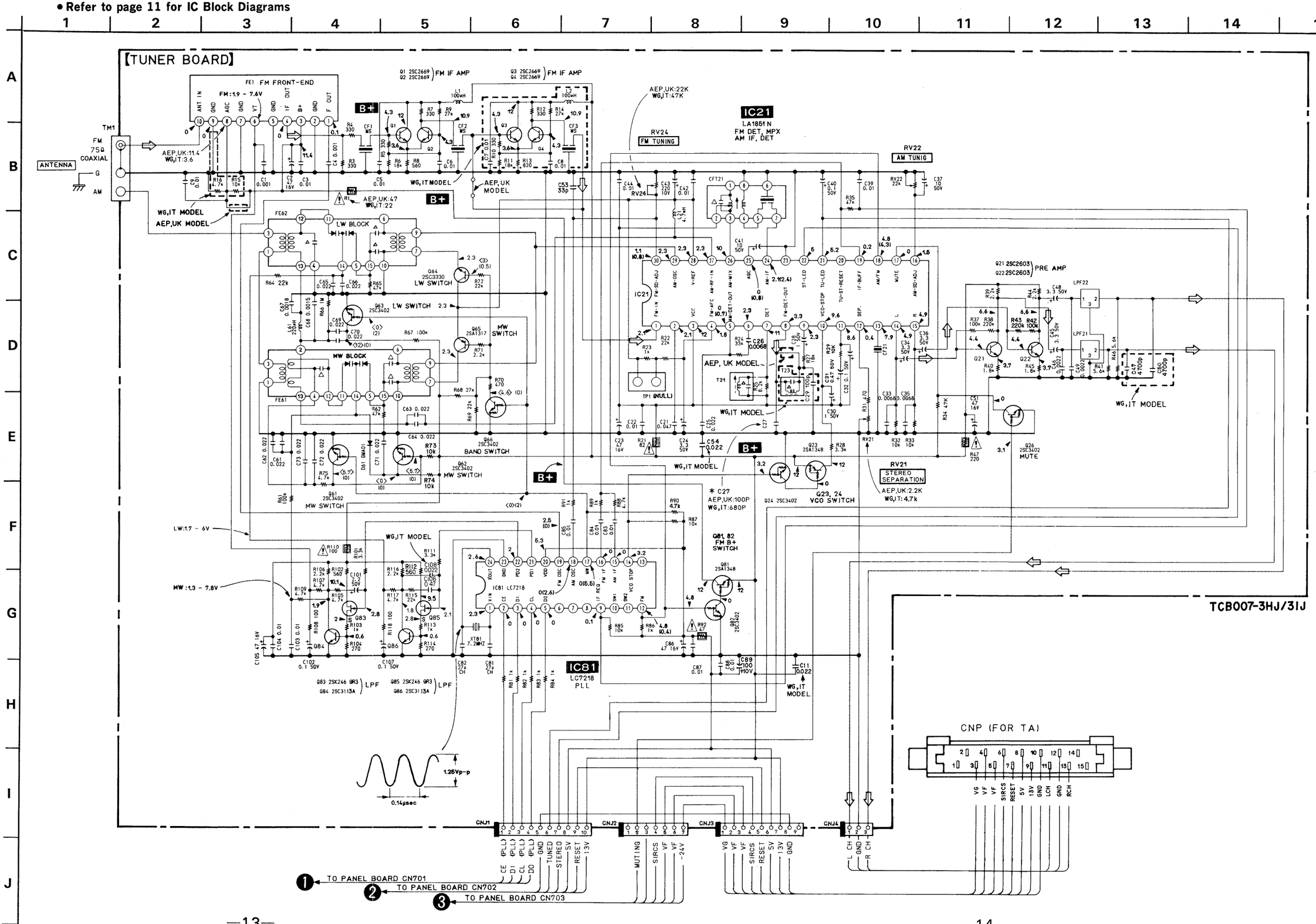


FE1 (AEP, UK Model)

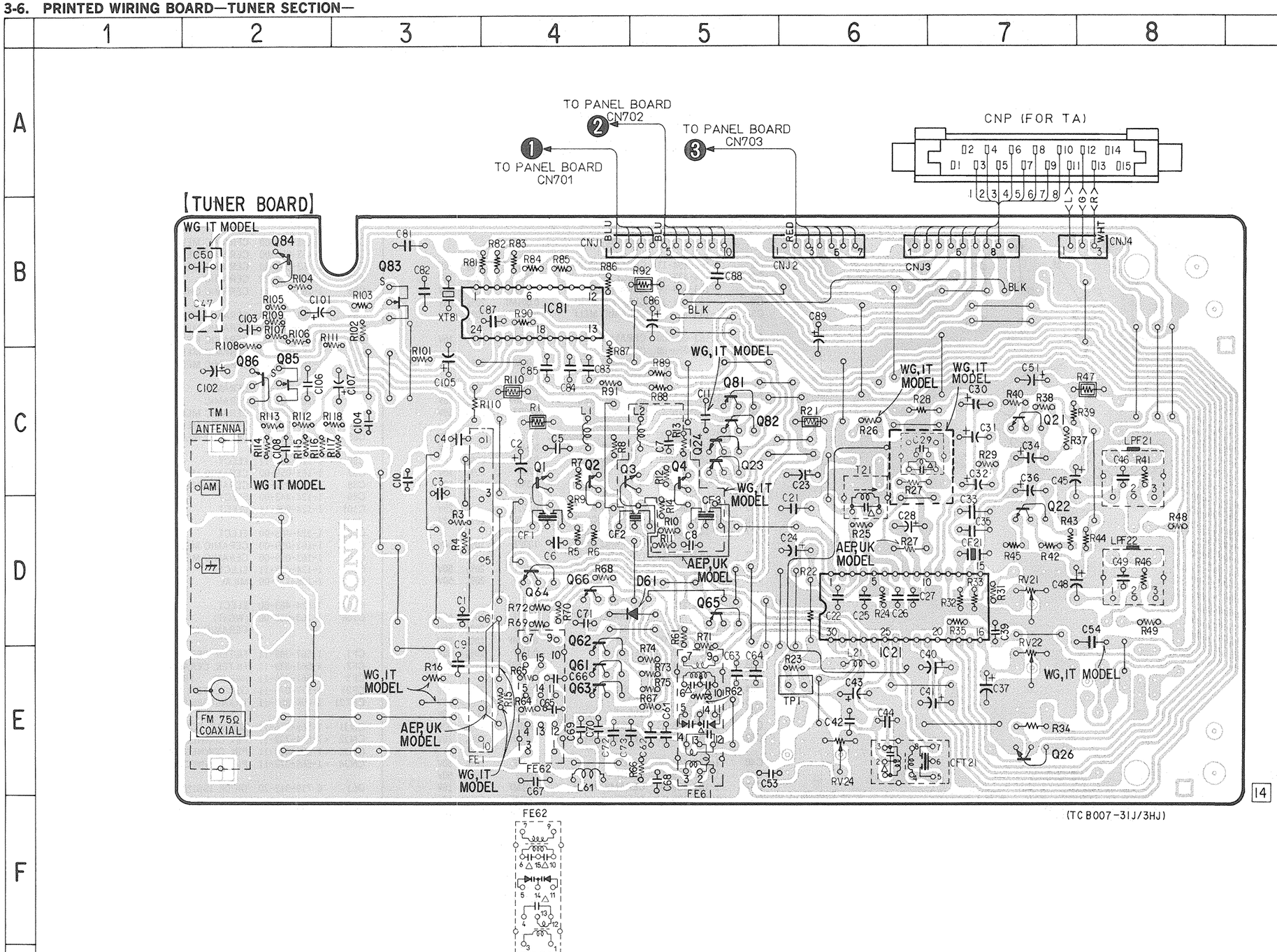


3-5. SCHEMATIC DIAGRAM—TUNER SECTION—

• Refer to page 11 for IC Block Diagrams



3-6. PRINTED WIRING BOARD—TUNER SECTION—



14

• **Semiconductor Location**

Ref. No.	Location
D61	D-5
IC21	D-6
IC81	B-4
Q1	C-4
Q2	C-4
Q3	C-5
Q4	C-5
Q21	C-7
Q22	D-7
Q23	C-5
Q24	C-5
Q26	E-7
Q61	E-4
Q62	E-4
Q63	E-4
Q64	D-4
Q65	D-5
Q66	D-4
Q81	C-5
Q82	C-5
Q83	B-3
Q84	B-2
Q85	C-2
Q86	C-2

Note:

- ○—— : parts extracted from the component side.
- [ ]— indicates side identified with part number.
- WG: West Germany Model
- IT: Itarian Model

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▭ : adjustment for repair.
- Power voltage is supply from TA-H300
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): AM
  < >: LW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
- WG: West Germany Model
- IT: Itarian Model

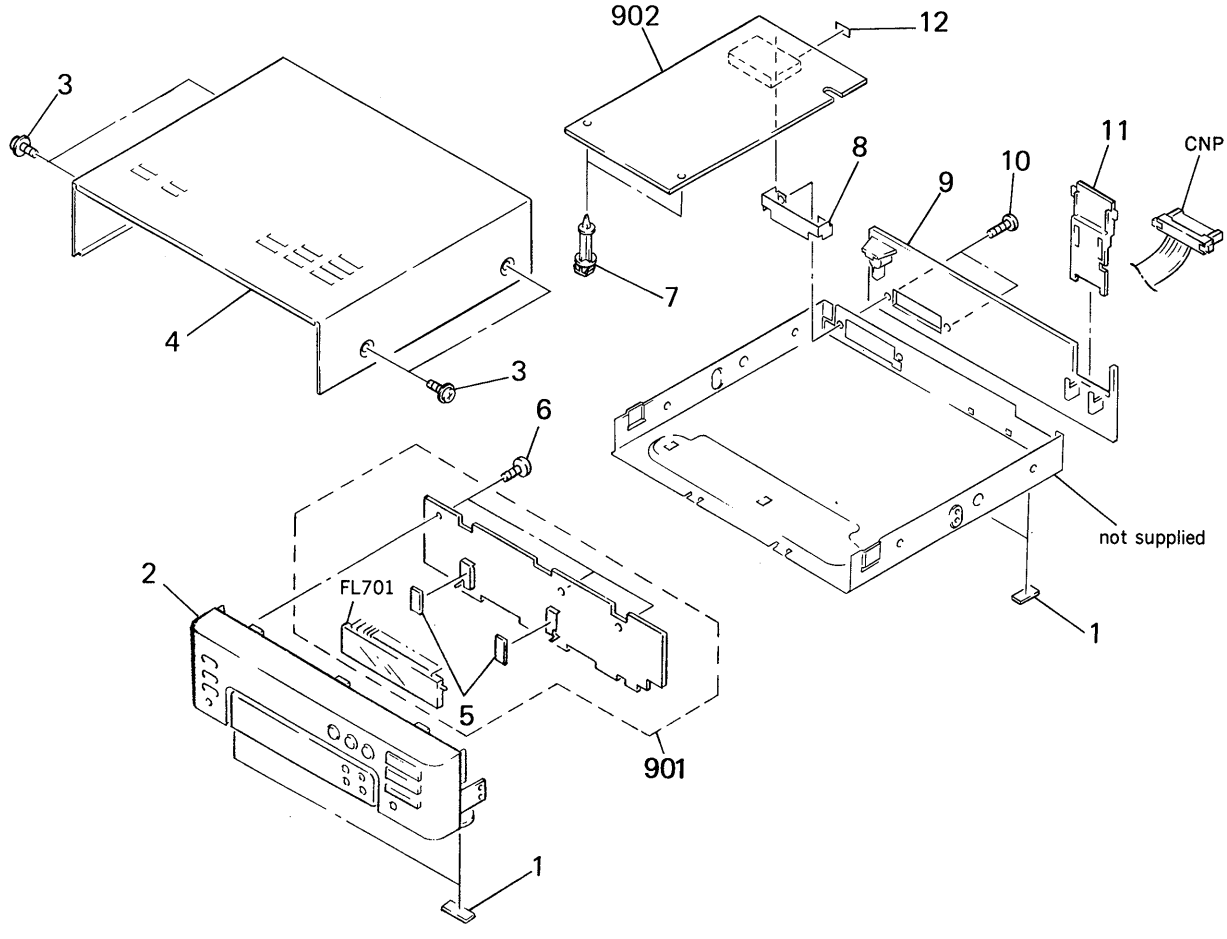
SECTION 4
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- WG: West Germany Model
- IT: Itarian Model



Ref.No	Part No.	Description	Remarks
1	4-930-336-01	FOOT (FELT)	
2	X-4930-316-1	PANEL ASSY (EX), FRONT	
3	3-704-366-01	SCREW (CASE) (M3X8)	
4	4-932-844-11	CASE	
5	4-932-810-01	CUSHION (FL)	
6	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
7	*4-914-008-01	HOLDER, PCB	
8	*4-924-988-11	PLATE(ST), GROUND	
9	*4-930-346-01	PANEL (ST), BACK	
10	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
11	*4-930-344-01	HOLDER (CONNECTION CORD)	
12	*4-612-009-01	(WG, IT)....SPACER (A)	
901	A-4334-654-A	(IT)....MOUNTED PCB, PANEL	
901	*A-4334-653-A	(AEP, UK, WG)....MOUNTED PCB, PANEL	
902	*A-4303-187-A	(AEP, UK)....MOUNTED PCB, TUNER (TCB007-3HJ)	
902	*A-4303-188-A	(WG, IT)....MOUNTED PCB, TUNER (TCB007-3IJ)	
CNP	1-575-679-11	CORD (WITH CONNECTOR)	
FL701	1-517-587-11	INDICATOR TUBE, FLUORESCENT	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- WG: West Germany Model
- IT: Itarian Model

TUNER

Ref.No	Part No.	Description			
		CAPACITOR			
C1	1-162-294-11	CERAMIC CHIP	0.001MF	20%	25V
C2	1-124-477-11	ELECT	47MF	20%	16V
C3	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C4	1-162-294-31	CERAMIC CHIP	0.001MF	20%	25V
C5	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C6	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C7	1-163-059-00	(WG,IT)....			
		CERAMIC MELF	0.01MF	20%	16V
C8	1-163-059-00	(WG, IT)....			
		CERAMIC MELF	0.01MF	20%	16V
C9	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C10	1-162-516-11	CERAMIC CHIP	100PF	10%	50V
C11	1-101-005-00	(WG,IT)....CERAMIC	0.022MF		50V
C21	1-101-006-00	CERAMIC	0.047MF		50V
C22	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C23	1-124-477-11	ELECT	47MF	20%	16V
C24	1-123-382-00	ELECT	3.3MF	20%	50V
C25	1-163-063-00	CERAMIC MELF	0.022MF		25V
C26	1-163-019-00	CERAMIC CHIP	0.0068MF	20%	12V
C27	1-162-516-11	(AEP,UK)....			
		CERAMIC CHIP	100PF	10%	50V
C27	1-163-007-11	(WG,IT)....			
		CERAMIC CHIP	680PF	20%	50V
C28	1-124-791-11	ELECT	1.0MF	20%	50V
C29	1-162-516-11	(WG,IT)....			
		CERAMIC CHIP	100PF	10%	50V
C30	1-124-791-11	ELECT	1.0MF	20%	50V
C31	1-124-902-00	ELECT	0.47MF	20%	50V
C32	1-124-463-00	ELECT	0.1MF	20%	50V
C33	1-130-481-00	FILM	0.0068MF	5%	50V
C34	1-123-382-00	ELECT	3.3MF	20%	50V
C35	1-130-481-00	FILM	0.0068MF	5%	50V
C36	1-123-382-00	ELECT	3.3MF	20%	50V
C37	1-123-875-11	ELECT	10MF	20%	50V
C39	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C40	1-124-463-00	ELECT	0.1MF	20%	50V
C41	1-123-875-11	ELECT	10MF	20%	50V
C42	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C43	1-126-176-11	ELECT	220MF	20%	10V
C44	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C45	1-123-382-00	ELECT	3.3MF	20%	50V
C46	1-161-375-00	CERAMIC CHIP	0.0022MF	20%	25V
C47	1-163-170-00	(WG,IT)....			
		CERAMIC CHIP	0.0047MF	20%	25V
C48	1-123-382-00	ELECT	3.3MF	20%	50V
C49	1-161-375-00	CERAMIC CHIP	0.0022MF	20%	25V
C50	1-163-170-00	(WG,IT)....			
		CERAMIC CHIP	0.0047MF	20%	25V
C51	1-124-477-11	ELECT	47MF	20%	16V
C53	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C54	1-101-005-00	(WG,IT)....CERAMIC	0.022MF		50V
C61	1-163-063-00	CERAMIC MELF	0.022MF		25V
C62	1-163-063-00	CERAMIC MELF	0.022MF		25V
C63	1-163-063-00	CERAMIC MELF	0.022MF		25V
C64	1-163-063-00	CERAMIC MELF	0.022MF		25V
C65	1-163-063-00	CERAMIC MELF	0.022MF		25V
C66	1-163-063-00	CERAMIC MELF	0.022MF		25V
C67	1-102-120-00	CERAMIC	0.0018MF	10%	50V
C68	1-163-111-11	CERAMIC CHIP	0.0015MF	20%	25V
C69	1-163-063-00	CERAMIC MELF	0.022MF		25V
C70	1-163-063-00	CERAMIC MELF	0.022MF		25V
C71	1-163-063-00	CERAMIC MELF	0.022MF		25V
C72	1-163-063-00	CERAMIC MELF	0.022MF		25V
C73	1-163-063-00	CERAMIC MELF	0.022MF		25V
C81	1-102-961-00	CERAMIC	27PF	5%	50V
C82	1-102-961-00	CERAMIC	27PF	5%	50V
C83	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C84	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C85	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C86	1-124-477-11	ELECT	47MF	20%	16V
C87	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C88	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C89	1-124-443-00	ELECT	100MF	20%	10V
C101	1-124-925-11	ELECT	2.2MF	20%	50V
C102	1-124-463-00	ELECT	0.1MF	20%	50V
C103	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C104	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C105	1-124-477-11	ELECT	47MF	20%	16V
C106	1-136-173-00	MILAL	0.47MF	5%	50V
C107	1-124-463-00	ELECT	0.1MF	20%	50V
C108	1-163-063-00	(WG,IT)....			
		CERAMIC MELF	0.022MF		25V
CF1	1-567-389-11	FILTER, CERAMIC			
CF2	1-567-389-11	FILTER, CERAMIC			
CF3	1-567-389-11	(WG,IT)....FILTER,CERAMIC			
CF21	1-577-075-11	OSCILLATOR, CERAMIC (19KHz)			
CFT21	1-404-853-11	TRANSFORMER,IF(CERAMIC FILTER)			
CNJ1	*1-568-276-11	SOCKET, CONNECTOR 10P			
CNJ2	*1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
CNJ3	*1-568-419-11	PIN, CONNECTOR 9P			
CNJ4	*1-568-372-11	PIN, CONNECTOR 3P			
D61	8-719-912-20	DIODE 1SS120			
FE1	1-463-857-11	(WG,IT)....FRONT END (FM)			
FE1	1-463-862-21	(AEP,UK)....FRONT END, FM			
FE61	1-236-462-11	ENCAPSULATED COMPONENT (MW RF)			
FE62	1-236-463-11	ENCAPSULATED COMPONENT (LW RF)			
IC21	8-759-821-45	IC LA1851N			
IC81	8-759-820-91	IC LC7218			
L1	1-410-645-31	MICRO INDUCTOR 100UH			
L2	1-410-645-31	(WG,IT)....MICRO INDUCTOR 100UH			
L21	1-407-500-00	MICRO INDUCTOR 4.7MMH			
L61	1-410-525-11	MICRO INDUCTOR 220UF			
LPF21	1-235-164-00	FILTER, LOW PASS			
LPF22	1-235-164-00	FILTER, LOW PASS			
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY			
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY			

Ref.No	Part No.	Description				
Q3	8-129-230-99	(WG,IT)....TRANSISTOR 2SC2669-OY				
Q4	8-129-230-99	(WG,IT)....TRANSISTOR 2SC2669-OY				
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q23	8-729-900-61	TRANSISTOR DTA114ES				
Q24	8-729-900-80	TRANSISTOR DTC114ES				
Q26	8-729-900-80	TRANSISTOR DTC114ES				
Q61	8-729-900-80	TRANSISTOR DTC114ES				
Q62	8-729-900-80	TRANSISTOR DTC114ES				
Q63	8-729-900-80	TRANSISTOR DTC114ES				
Q64	8-729-820-24	TRANSISTOR 2SC3330-T				
Q65	8-729-820-10	TRANSISTOR 2SA1317-SU				
Q66	8-729-900-80	TRANSISTOR DTC114ES				
Q81	8-729-900-61	TRANSISTOR DTA114ES				
Q82	8-729-900-80	TRANSISTOR DTC114ES				
Q83	8-729-202-67	TRANSISTOR 2SK246GR3				
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB				
Q85	8-729-202-67	TRANSISTOR 2SK246GR3				
Q86	8-729-230-93	TRANSISTOR 2SC3113-AB				

RESISTOR

R1	⚠1-249-397-11	(WG, IT).... CARBON (SMALL)	22	5%	1/4W	F
R1	⚠1-249-401-11	(AEP,UK).... CARBON (SMALL)	47	5%	1/4W	F
R3	1-249-329-11	CARBON MELF	330	5%	1/8W	
R4	1-249-329-11	CARBON MELF	330	5%	1/8W	
R5	1-249-329-11	CARBON MELF	330	5%	1/8W	
R6	1-249-350-11	CARBON MELF	18K	5%	1/8W	
R7	1-249-329-11	CARBON MELF	330	5%	1/8W	
R8	1-249-332-11	CARBON MELF	560	5%	1/8W	
R9	1-249-352-11	CARBON MELF	27K	5%	1/8W	
R10	1-249-329-11	(WG,IT).... CARBON MELF	330	5%	1/8W	
R11	1-249-350-11	(WG,IT).... CARBON MELF	18K	5%	1/8W	
R12	1-249-329-11	(WG,IT).... CARBON MELF	330	5%	1/8W	
R13	1-249-334-11	(WG,IT).... CARBON MELF	820	5%	1/8W	
R14	1-249-352-11	(WG,IT).... CARBON MELF	27K	5%	1/8W	
R15	1-249-347-11	(WG,IT).... CARBON MELF	10K	5%	1/8W	
R16	1-249-343-11	(WG,IT).... CARBON MELF	4.7K	5%	1/8W	
R21	1-249-404-00	CARBON (SMALL)	82	5%	1/4W	F
R22	1-249-433-11	CARBON (SMALL)	22K	5%	1/4W	
R23	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R24	1-249-353-11	CARBON MELF	33K	5%	1/8W	
R25	1-249-346-11	CARBON MELF	8.2K	5%	1/8W	
R26	1-249-340-11	(WG,IT).... CARBON MELF	2.7K	5%	1/8W	
R27	1-249-432-11	CARBON (SMALL)	18K	5%	1/4W	
R28	1-249-423-11	CARBON (SMALL)	3.3K	5%	1/4W	
R29	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R31	1-249-331-11	CARBON MELF	470	5%	1/8W	
R32	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R33	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R34	1-249-437-11	CARBON (SMALL)	47K	5%	1/4W	
R35	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R37	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R38	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R39	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R40	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R41	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R42	1-249-359-11	CARBON MELF	100K	5%	1/8W	

Ref.No	Part No.	Description				
R43	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R44	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R45	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R46	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R47	⚠1-249-409-11	CARBON (SMALL)	220	5%	1/4W	F
R48	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R49	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R61	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R62	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R64	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R65	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R66	1-215-493-00	CARBON MELF	1M	5%	1/5W	
R67	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R68	1-249-352-11	CARBON MELF	27K	5%	1/8W	
R69	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R70	1-249-331-11	CARBON MELF	470	5%	1/8W	
R71	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R72	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R73	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R74	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R75	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R81	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R82	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R83	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R84	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R85	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R86	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R87	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R88	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R89	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R90	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R91	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R92	⚠1-249-401-11	CARBON (SMALL)	47	5%	1/4W	F
R101	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R102	1-249-332-11	CARBON MELF	560	5%	1/8W	
R103	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R104	1-249-328-11	CARBON MELF	270	5%	1/8W	
R105	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R106	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R107	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R108	1-249-323-11	CARBON MELF	100	5%	1/8W	
R109	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R110	⚠1-249-405-11	CARBON (SMALL)	100	5%	1/4W	F
R111	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R112	1-249-332-11	CARBON MELF	560	5%	1/8W	
R113	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R114	1-249-328-11	CARBON MELF	270	5%	1/8W	
R115	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R116	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R117	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R118	1-249-323-11	CARBON MELF	100	5%	1/8W	

RV21	1-238-013-11	(AEP,UK)....RES, ADJ, CARBON 2.2K
RV21	1-238-015-11	(WG,IT)....RES, ADJ, CARBON 4.7K
RV22	1-238-017-11	RES, ADJ, CARBON 22K
RV24	1-238-017-11	(AEP,UK)....RES, ADJ, CARBON 22K
RV24	1-238-019-11	(WG,IT)....RES, ADJ, CARBON 47K
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR
T23	1-236-465-11	(WG,IT)....ENCAPSULATED COMPONENT
TM1	*1-537-138-31	TERMINAL BOARD (ANTENNA)
TP1	*1-560-060-00	PIN, CONNECTOR 2P
XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

EXCEPT FOR TUNER

Ref.No	Part No.	Description
901	A-4334-654-A	(IT)....MOUNTED PCB, PANEL
901	*A-4334-653-A	(AEP, UK, WG)....MOUNTED PCB, PANEL
902	*A-4303-187-A	(AEP,UK)....MOUNTED PCB, TUNER (TCB007-3HJ)
902	*A-4303-188-A	(WG, IT)....MOUNTED PCB, TUNER (TCB007-3IJ)

CAPACITOR

C701	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C702	1-136-173-00	FILM	0.47MF	5%	50V
C703	1-162-306-11	CERAMIC	0.01MF	20%	16V
C704	1-126-094-11	ELECT	4.7MF	20%	25V
C705	1-162-200-31	CERAMIC	11PF	5%	50V
C706	1-162-200-31	CERAMIC	11PF	5%	50V
C707	1-136-173-00	FILM	0.47MF	5%	50V
C708	1-136-173-00	FILM	0.47MF	5%	50V
C709	1-164-159-11	CERAMIC	0.1MF		50V
C710	1-164-159-11	CERAMIC	0.1MF		50V

CB701	1-233-130-11	COMPOSITION CIRCUIT BLOCK
CB702	1-233-148-11	COMPOSITION CIRCUIT BLOCK
CB703	1-233-187-11	COMPOSITION CIRCUIT BLOCK
CB704	1-233-148-11	COMPOSITION CIRCUIT BLOCK
CN701	*1-568-279-11	SOCKET, CONNECTOR 4P
CN702	*1-568-281-11	SOCKET, CONNECTOR 6P
CN703	*1-568-281-11	SOCKET, CONNECTOR 6P
D701	8-719-912-20	(IT)....DIODE 1SS120
D702	8-719-912-20	(AEP, UK, WG)....DIODE 1SS120
D703	8-719-912-20	(IT)....DIODE 1SS120
D708	8-719-912-20	DIODE 1SS120
D709	8-719-912-20	DIODE 1SS120
D710	8-719-912-20	DIODE 1SS120
D712	8-719-912-20	DIODE 1SS120
D713	8-719-912-20	DIODE 1SS120
D714	8-719-912-20	DIODE 1SS120
D715	8-719-912-20	DIODE 1SS120
D716	8-719-912-20	DIODE 1SS120
D717	8-719-912-20	DIODE 1SS120
D718	8-719-912-20	DIODE 1SS120
D719	8-719-912-20	DIODE 1SS120
D720	8-719-912-20	DIODE 1SS120
D721	8-719-912-20	DIODE 1SS120
D722	8-719-912-20	DIODE 1SS120
D723	8-719-912-20	DIODE 1SS120
D724	8-719-912-20	DIODE 1SS120
FL701	1-519-517-11	INDICATOR TUBE, FLUORESCENT
IC701	8-759-239-79	IC TMP47C670N-1204
IC702	8-749-920-59	IC A1QH3020S
L701	1-410-521-11	INDUCTOR 100UH
L702	1-410-521-11	INDUCTOR 100UH
L703	1-408-080-00	INDUCTOR 100UH
L704	1-408-080-00	INDUCTOR 100UH
Q701	8-729-900-89	TRANSISTOR DTC144ES
Q702	8-729-900-89	TRANSISTOR DTC144ES
Q703	8-729-900-80	TRANSISTOR DTC114ES

Ref.No	Part No.	Description

RESISTOR

R701	1-249-405-11	CARBON	100	5%	1/4W
R702	1-249-438-11	CARBON	56K	5%	1/4W
R703	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-433-11	CARBON	22K	5%	1/4W
R706	1-249-438-11	CARBON	56K	5%	1/4W
R707	1-249-435-11	CARBON	33K	5%	1/4W
R708	1-249-441-11	CARBON	100K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-429-11	CARBON	10K	5%	1/4W
R712	1-249-429-11	CARBON	10K	5%	1/4W
R713	1-249-429-11	CARBON	10K	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W
R715	1-249-429-11	CARBON	10K	5%	1/4W
R716	1-249-429-11	CARBON	10K	5%	1/4W
R717	1-249-423-11	CARBON	3.3K	5%	1/4W
R718	1-249-429-11	CARBON	10K	5%	1/4W
R719	1-249-429-11	CARBON	10K	5%	1/4W
R720	1-249-429-11	CARBON	10K	5%	1/4W
R721	1-249-411-11	CARBON	330	5%	1/4W
R722	1-249-441-11	CARBON	100K	5%	1/4W
R723	1-249-441-11	CARBON	100K	5%	1/4W
R724	1-249-441-11	CARBON	100K	5%	1/4W
R725	1-249-441-11	CARBON	100K	5%	1/4W
R726	1-249-441-11	CARBON	100K	5%	1/4W
R727	1-249-421-11	CARBON	2.2K	5%	1/4W

RB701	1-233-125-11	COMPOSITION CIRCUIT BLOCK
S708	1-554-596-21	SWITCH, KEY BOARD (PRESET/TIME −)
S709	1-554-596-21	SWITCH, KEY BOARD (PRESET/TIME +)
S710	1-554-596-21	SWITCH, KEY BOARD (ENTER NEXT)
S711	1-554-596-21	SWITCH, KEY BOARD (STEREO/MUTING)
S713	1-554-596-21	SWITCH, KEY BOARD (MEMORY)
S714	1-554-596-21	SWITCH, KEY BOARD (SHIFT)
S715	1-554-596-21	SWITCH, KEY BOARD (BAND)
S717	1-554-596-21	SWITCH, KEY BOARD (TIME/FRQUENCY)
S718	1-554-596-21	SWITCH, KEY BOARD (TUNING +)
S719	1-554-596-21	SWITCH, KEY BOARD (TUNING −)
S720	1-554-596-21	SWITCH, KEY BOARD (CLOCK)
S721	1-554-596-21	SWITCH, KEY BOARD (TIMER CONTROL)
S722	1-554-596-21	SWITCH, KEY BOARD (TIMER SET)
S723	1-554-596-21	SWITCH, KEY BOARD (SLEEP)
S724	1-554-596-21	SWITCH, KEY BOARD (AUTO/MANUAL)
X701	1-567-821-21	VIBRATOR, CRYSTAL (4.19MHz)

9-955-807-21

Sony Corporation
Audio Group

English
90D0460-1
Printed in Japan
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Published by Customer Relations and Service Group

TC-H500

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

This set is the cassette deck section in MHC-2500, MHC-3500, MHC-5500.

Model Name Using Similar Mechanism	TC-818M
Tape Transport Mechanism Type	Deck A TCM-170RA1
	Deck B TCM-170RB7

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF)
	40 – 13,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S)
	40 – 14,000 Hz (±3 dB), using TYPE II cassette
	40 – 15,000 Hz (±3 dB), using TYPE IV cassette
Wow and flutter	0.1% WRMS ±0.3% (DIN)
Dimensions	Approx. 225 × 118 × 235 mm (w/h/d) ($9 \times 4^{3}/_{4} \times 9^{3}/_{8}$ inches)
Weight	Approx. 2.5 kg (5 lb 8 oz)

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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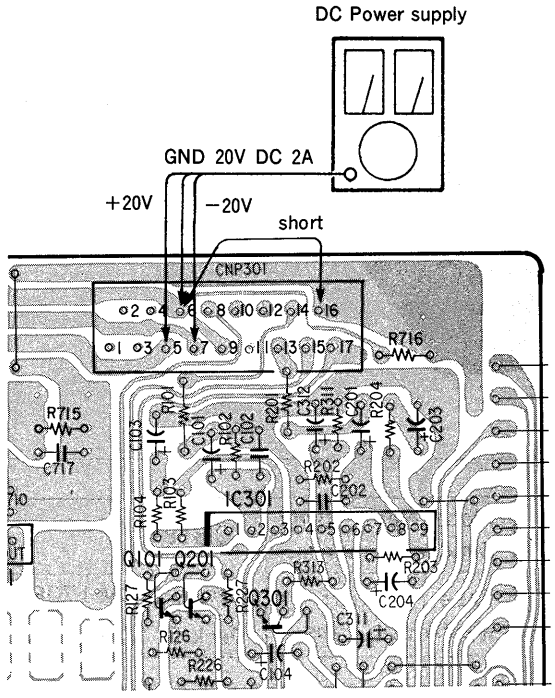
STEREO CASSETTE DECK

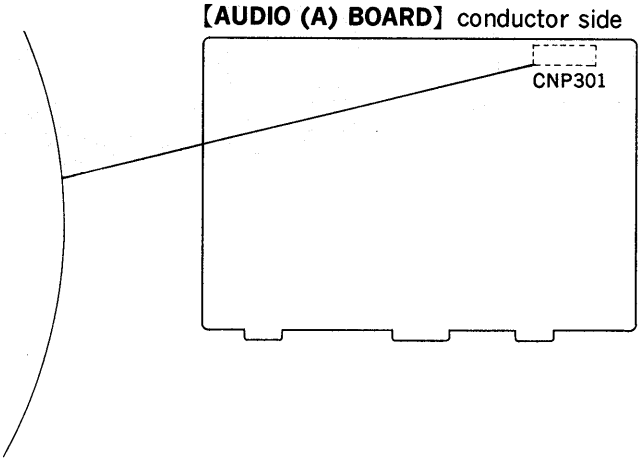
SONY®

REPAIRING PRECAUTION

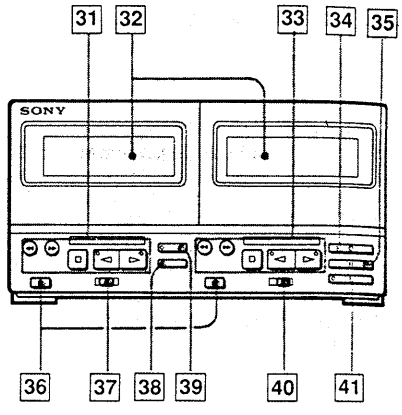
[To apply B+ voltage]

Thepower of this unit is fed from amlifier.
Because of this, connect the DC Power supply as illustrated below when this unit alone operates.





SECTION 1
GENERAL



31 Tape operation buttons for deck A
◀◀ / ▶▶: Fast winding
□ : Stop
◁: Reverse play
▷: Forward play
32 Cassette holders
33 Tape operation buttons for deck B
34 REC (recording) button
35 PAUSE button
36 EJECT buttons
37 DIRECTION MODE selector
38 TAPE DUBBING HIGH SPEED button
39 CD SYNCHRO (CD synchronized recording) button
40 DOLBY NR selector
41 AMS (Automatic Music Sensor)/BLANK SKIP button

SECTION 2
ADJUSTMENTS

2-1. MECHANICAL ADJUSTMENTS

PRECAUTION

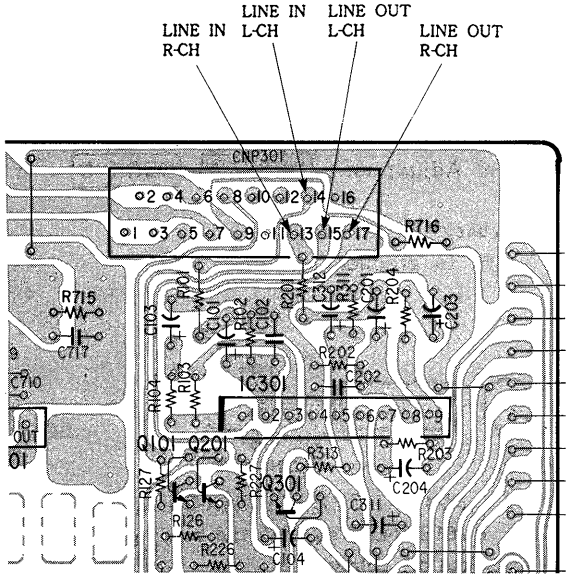
1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head　　pinch roller
   erase head　　rubber belts
   capstan　　idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the perts adjusted.

Torque Measurement

Torque	Torque Meter	Meter Reading
FWD	CQ-102C	30 to 60g•cm (0.416 to 0.833 oz•inch)
FWD Back tension	CQ-102C	1 to 5g•cm (0.014 to 0.069 oz•inch)
REV	CQ-102RC	30 to 60g•cm (0.416 to 0.833 oz•inch)
REV Back Tension	CQ-102RC	1 to 5g•cm (0.014 to 0.069 oz•inch)
FF, REW	CQ-201B	100 to 170g•cm (1.39 to 2.36 oz•inch)

• Location of LINE IN/OUT

AUDIO Board (A) CNP301



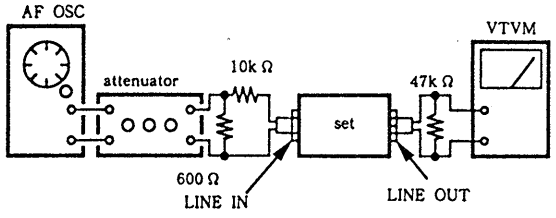
2-2. ELECTRICAL ADJUSTMENTS

Note :The adjustment should be performed in the order given in the service manual.
The adjustments should be performed for both L-CH and R-CH.

• Switches and controls should be set as follows unless otherwise specified.
DOLBY NR switch　　: OFF

• Standard Record :
Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

−Record Mode−



Standard Input Level

INPUT terminal	LINE IN
source impedance	10kΩ
input level	0.31V (−8dB)

Standard Output Level

OUTPUT terminal	LINE OUT
load impedance	47kΩ
output level	0.25V (−10dB)

• Test tape

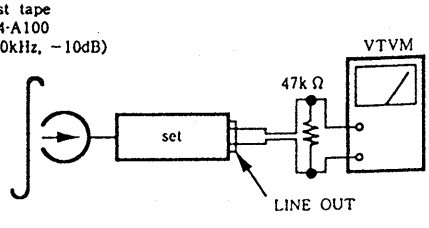
Type	Signal	Used for
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB LEVEL Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

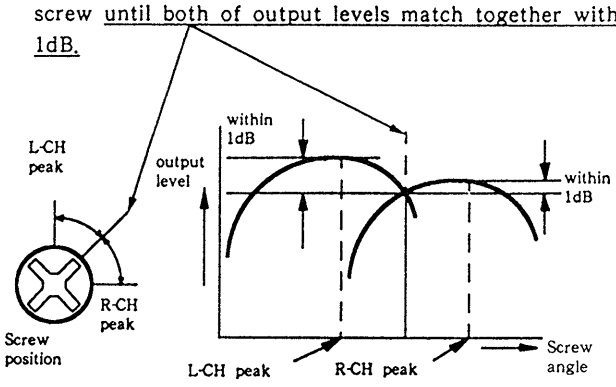
DECK A　DECK B

Procedure :

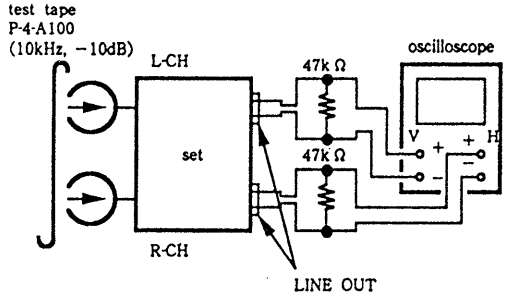
1. Mode : FWD playback

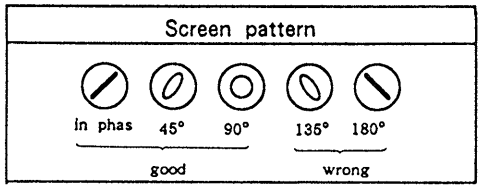


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



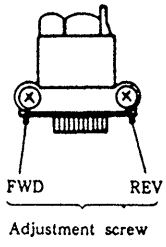
3. Phase Check
   Mode : playback

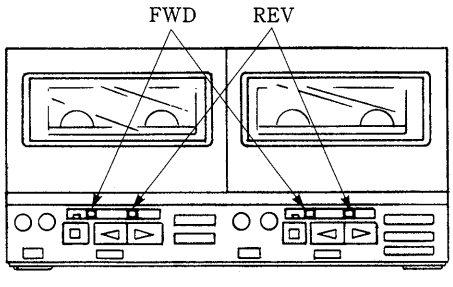




4. Set in the REV mode and repect the step 1-3.
5. After the adjustment, lock the screws with locking compound.

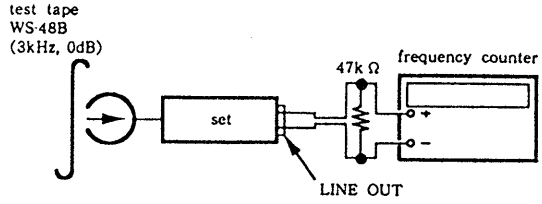
Adjustment Location : Record/Playback head
(Adjustable without disassembly.)





Tape Speed Adjustment DECK A DECK B

Procedure :
Mode : FWD playback



Perform high speed adjustment before normal speed adjustment.
Connect TP1 to ground with jumper wire and continue to press HIGH SPEED DUBING switch : High speed playback.
After the high speed adjustment, remove jumper wire of TP1.
Play back the test tape WS-48B and ajust to meet the specifications below.

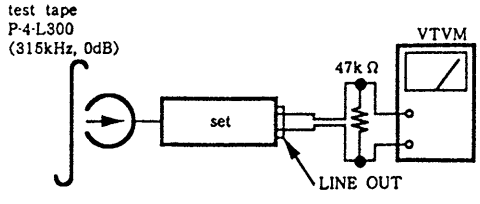
speed	deck	Adjustment Part	variable resistor of motor	S805 High speed dubbing	frequency countor reading
high	A	M11A	(H)	ON	5,960±20Hz
	B	M11B	(H)		
normal	A	M11A	(L)	OFF	2,980±10Hz
	B	M11B	(L)		

Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

Adjustment Location :
deck A : motor (M11A) rear side
deck B : motor (M11B) rear side

Playback Level Adjustment DECK A DECK B

Procedure :
Mode : playback
Connect TP1 to ground.



Adjust deck A : RV41A(L-CH), RV61A(R-CH) and deck B : RV41B(L-CH) , RV61B(R-CH) so that the reading on VTVM meets the specification below.

LINE OUT level : −10±0.5dB (0.23 to 0.26V)
Level difference between channels : less than 0.5dB
Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD board

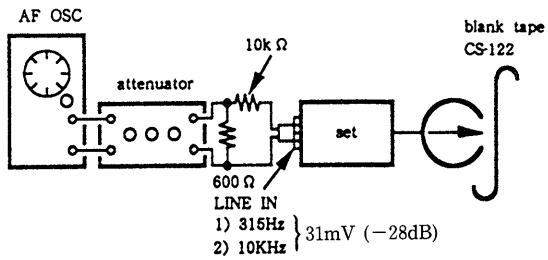
Record Bias Adjustment DECK B

Setting :

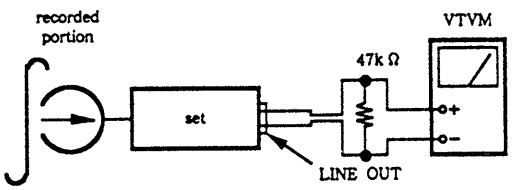
REC LEVEL control : standard record (See page 3.)
Connect TP1 to ground.

Procedure :

1. Mode : record



2. Mode : playback



Confirm that the 10kHz playback output is 0±0.5dB relative to the 315Hz output. If necessary, adjust RV42 (L-CH), RV62 (R-CH) and repeat the steps given above.
After the ajustment remove jumper wire of TP1.

Adjustment Location : MD B board

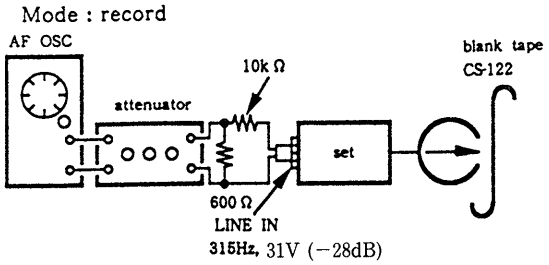
Record Level Adjustment DECK B

Setting :

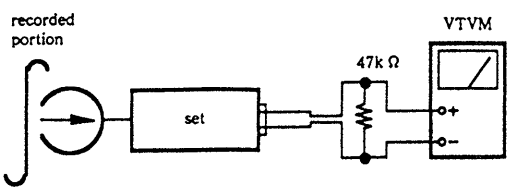
REC LEVEL control : standard record (See page 3.)
Connect TP1 to ground.

Procedure :

1. Mode : record



2. Mode : playback

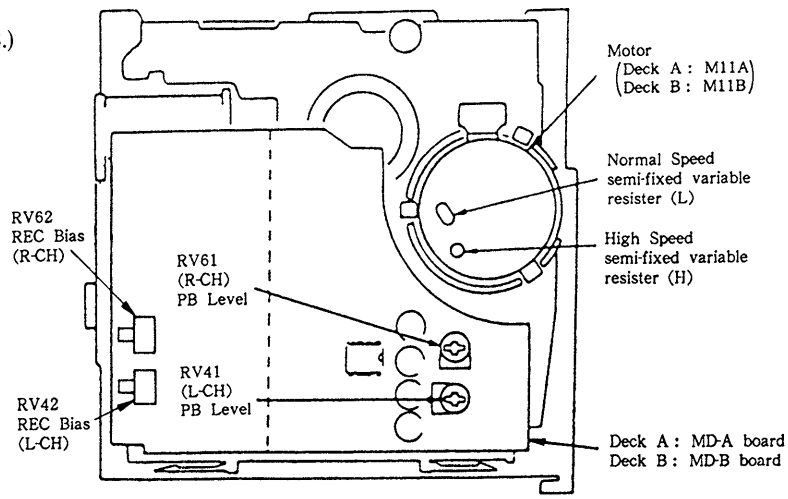


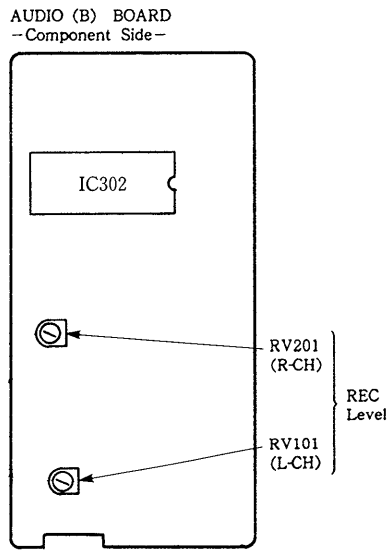
3. Play back the signal recorded in step 1.
   Confirm that the signal level is within the specification below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step1-3.
4. After the adjustment, remove jumper wire of TP1.

LINE OUT level : −30±0.5dB (23 to 26nV)

Adjustment Location : audio (B) board

−Adjusting Parts Location Diagram−





SECTION 3
DIAGRAMS

3-1. IC801 M50964-223SP PIN FUNCTIONS

PIN No.	PIN NAME	I/O	SIGNAL NAME	FUNCTION
1	Vcc		Vcc	POWER 5 ±0.5 V
2	AVSS		AVSS	Analogue system GND
3	VREF	I	VREF	Analogue system reference voltage input
4	D-A	O	D-A	D/A conversion output (Not used : OPEN)
5	PWM	O	PWM	PWM output (Not used : GND)
6	P63	O	$\overline{\text{AMS}}$	AMS LED indication output
7	P62	O	$\overline{\text{A FWD}}$	Deck A FWD LED output
8	P61	O	$\overline{\text{BIAS IV}}$	TYPE IV bias oscillation output
9	P60	O	$\overline{\text{BIAS II}}$	TYPE II bias oscillation output
10	P47	O	$\overline{\text{A REV}}$	Deck A RVS LED output
11	P46	O	$\overline{\text{A REV}}$	Deck A RVS LED output
12	AN5	I	B HALF	Deck B Record prevention claw A, B detection input (Analogue) Voltage (V) / 1 V / 1.9 V / 2.8 V / 3.9 V / 5 V Half / ON / ON / ON / ON / OFF Claw A / OFF / ON / OFF / ON / OFF Claw B / ON / ON / OFF / OFF / OFF
13	AN4	I	KEY3	KEY input
14	AN3	I	KEY2	Voltage (V) / 0 / 0.3 / 0.7 / 1.2 / 1.7 / 2.3 / 2.8 / 3.4 / 4.0 / 4.5 / 5.0 KEY1 / B■ / B▮▮ / B▶ / B◀ / BO / A◀◀ / A▶▶ / / □□ B / □□ C / OFF
15	AN2	I	KEY1	KEY2 / A■ / A▮▮ / A▶ / A◀ / / B◀◀ / B▶▶ / B● / ⟲ / RELAY / OFF KEY3 / AMS / / H DUB / N DUB / / / / / / /
16	P41	O	$\overline{\text{B FWD}}$	Deck B FWD LED output
17	P40	O	$\overline{\text{B REV}}$	Deck B RVS LED output
18	P37	O	$\overline{\text{A FWD}}$	Deck A FWD LED output
19	P36	O	$\overline{\text{B PAUSE}}$	Deck B PAUSE LED output
20	P35	O	$\overline{\text{B REC}}$	Deck B REC LED output
21	P34	O	DOLBY $\overline{\text{B}}$/C	Dolby $\overline{\text{B}}$/C output
22	P33	O	DOLBY $\overline{\text{ON}}$/OFF	Dolby $\overline{\text{ON}}$/OFF output
23	P32	I	SIRCS	SIRCS input or AUDIO BUS reverse input
24	P31	O	$\overline{70}$/120	Playback EQ output for playing deck
25	P30	O	AUB OUT	AUDIO BUS output
26	INTI	I	AUB IN	AUDIO BUS normal input
27	CNVSS		CNVSS	GND
28	$\overline{\text{RESET}}$	I	$\overline{\text{RESET}}$	Microcomputer reset input
29	XIN	I	XIN	Clock input (4 MHz)
30	XO	O	XO	Clock output (4 MHz)
31	Φ	O	Φ	(Not used : OPEN)
32	Vss		Vss	GND
33	P57	I	$\overline{\text{TEST}}$	Electrical adjusting test mode setting
34	P56	I	TYPE IV	TYPE IV switch input
35	P55	I	B70/$\overline{120}$	Deck B TYPE II switch input
36	P54	I	B SHUT	Deck B Reel table signal input
37	P53	I	A70/$\overline{120}$	Deck A TYPE II switch input
38	P52	I	A SHUT	Deck B Reel table signal input
39	P51	I	$\overline{\text{A HALF}}$	Deck A Half switch input

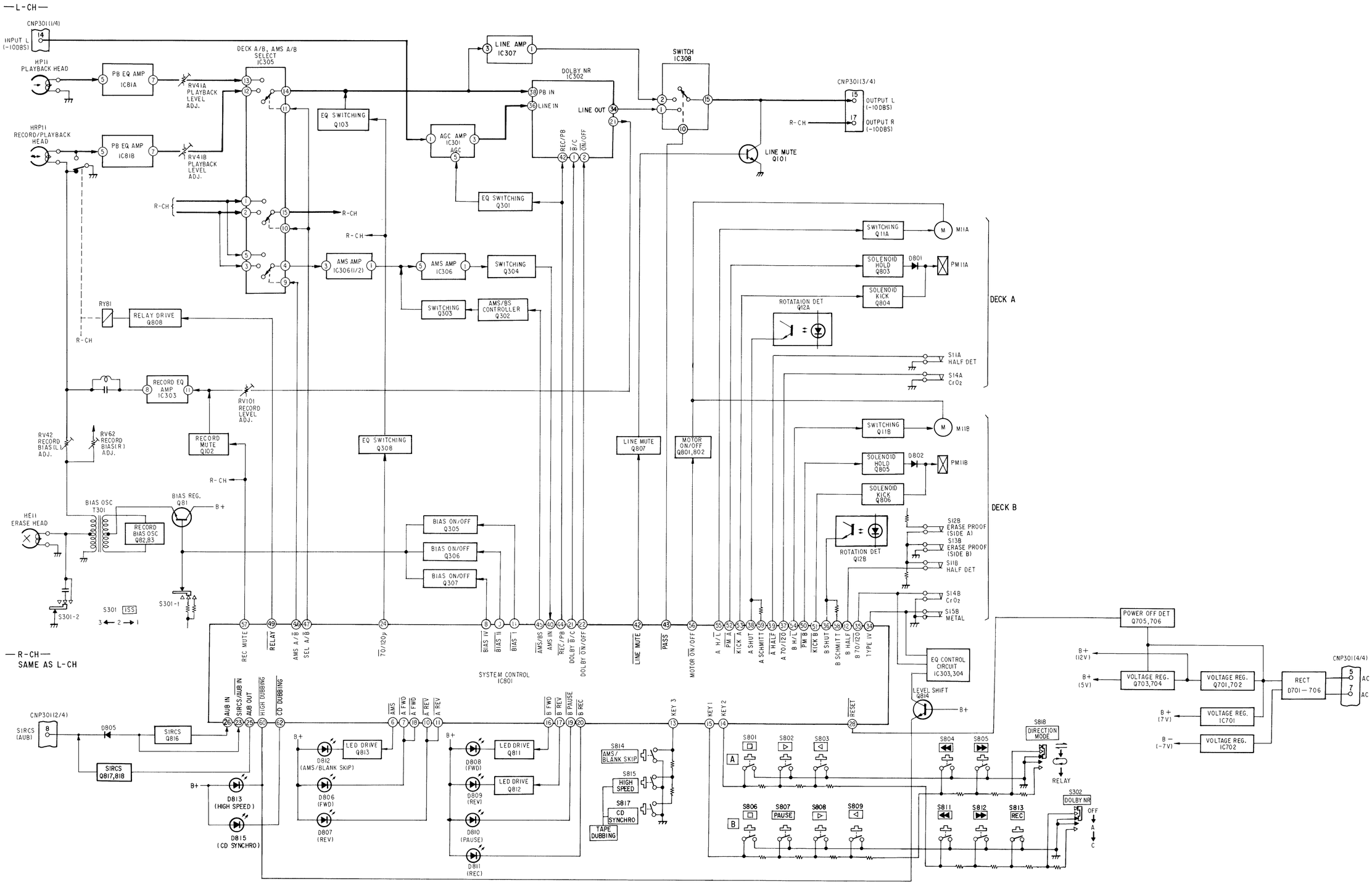
PIN No.	PIN NAME	I/O	SIGNAL NAME	FUNCTION
40	P50	I	AMSIN	AMS signal input
41	P17	O	$\overline{\text{MMUTE}}$	Meter mute output
42	P16	O	$\overline{\text{LMUTE}}$	Line mute output
43	P15	O	$\overline{\text{PASS}}$	PASS AMP change output
44	P14	O	$\overline{\text{REC}}$/PB	Dolby IC REC/PB select output
45	P13	O	$\overline{\text{AMS}}$/BS	AMS AMP characteristics change output
46	P12	O	AMS A/$\overline{\text{B}}$	AMS AMP input Deck A/B select output
47	P11	O	SEL A/$\overline{\text{B}}$	Dolby IC PB input Deck A/B select output
48	P10	O	$\overline{\text{BIAS I}}$	TYPE I bias oscillation output
49	P07	O	$\overline{\text{RELAY}}$	REC/PB change relay output
50	P06	O	$\overline{\text{PM B}}$	Deck B plunger hold output
51	P05	O	$\overline{\text{KICK B}}$	Deck B plunger kick output
52	P04	O	$\overline{\text{PM A}}$	Deck A plunger hold output
53	P03	O	$\overline{\text{KICK A}}$	Deck A plunger kick output
54	P02	O	B H/$\overline{\text{L}}$	Deck B capstan motor speed select
55	P01	O	A H/$\overline{\text{L}}$	Deck A capstan motor speed select
56	P00	O	M $\overline{\text{ON}}$/OFF	Capstan motor $\overline{\text{ON}}$/OFF
57	P27	O	REC MUTE	REC MUTE output
58	P26	O	B SCHMITT	Deck B reel table schmitt output
59	P25	O	A SCHMITT	Deck A reel table schmitt output
60	P24	O	$\overline{\text{HDUB}}$	High Speed Dubbing LED output
61	P23	O	$\overline{\text{NDUB}}$	Normal Speed Dubbing LED output
62	P22	O	$\overline{\text{CD DUB}}$	Auto CD Synchro LED output
63	P21	O	$\overline{\text{A PAUSE}}$	Deck A PAUSE LED output
64	P20	O	$\overline{\text{SIRCS}}$/AUB	SIRCS/AUDIO BUS mode select

[TEST MODE]

When making pin ㉝ low (connect TP1 to ground with jumper wire), following function operates.

1. Source monitor
   Release the line mute while recording.
2. High speed playback
   On recording, while pressing HIGH SPEED (DUBBING) button, high speed playback operates.
3. Record memory stop
   Using DIRECTION MODE switch ⇆, returns to the recording start point and stops or plays.

3-2. BLOCK DIAGRAM



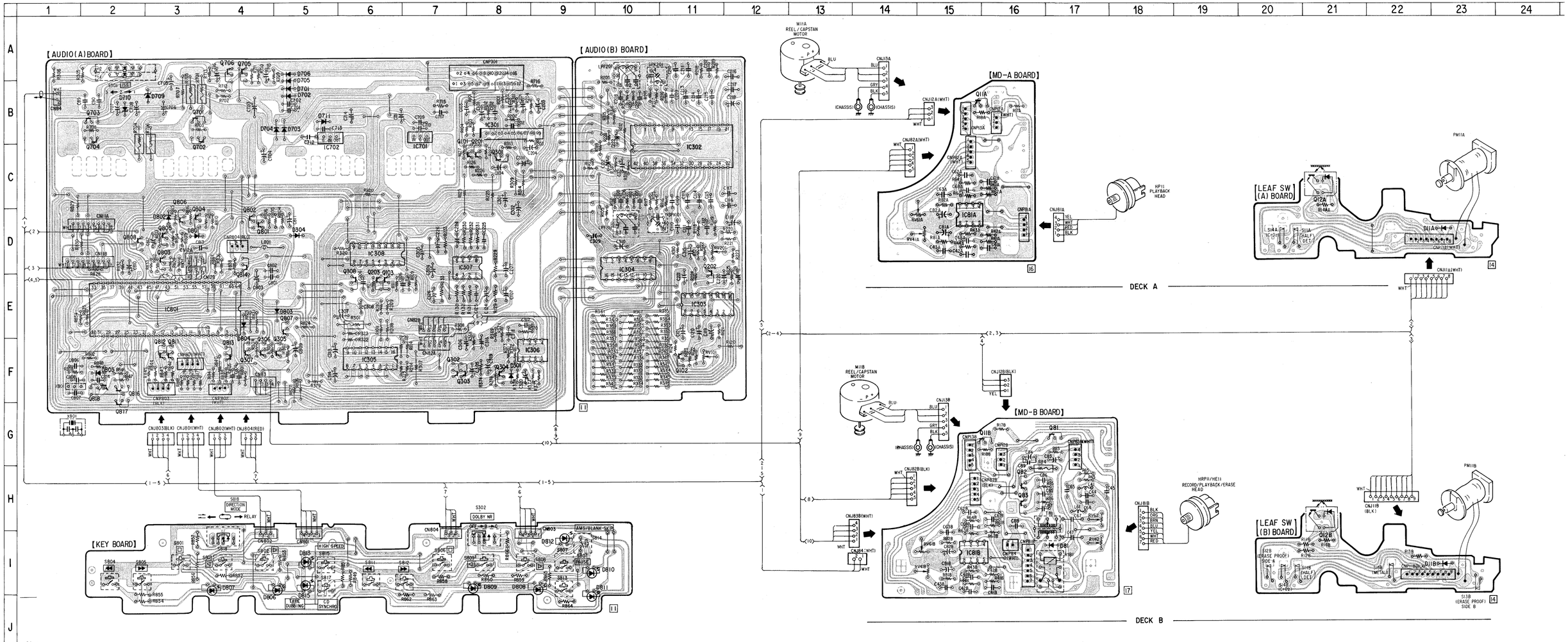
Note on Schematic Diagram:

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : STOP
  ● : REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
  : PB (DECK A)
  : PB (DECK B)
  : REC (DECK B)



Note:

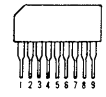
● ○—— : parts extracted from the component side.

• Semiconductor Location

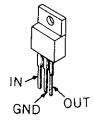
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D11A	D-23	IC81A	D-15	Q302	F-7
D11B	I-11	IC81B	I-15	Q303	F-7
D81	I-17	IC301	B-8	Q304	F-8
D301	F-8	IC302	B-11	Q305	F-5
D304	C-5	IC303	E-11	Q306	F-4
D701	B-5	IC304	D-10	Q307	F-4
D702	B-5	IC305	F-6	Q308	E-6
D703	B-5	IC306	F-8	Q701	B-3
D704	B-5	IC307	D-7	Q702	B-3
D705	A-5	IC308	D-6	Q703	B-2
D706	A-5	IC701	B-7	Q704	B-2
D709	B-3	IC702	B-5	Q705	A-4
D710	B-2	IC801	E-3	Q706	A-4
D711	B-5			Q801	D-4
D801	C-3	Q11A	B-16	Q802	D-4
D802	C-3	Q11B	G-16	Q803	D-3
D803	E-5	Q12A	C-21	Q804	D-3
D804	E-4	Q12B	H-21	Q805	D-3
D805	F-2	Q81	G-17	Q806	D-3
D806	I-4	Q82	H-16	Q807	E-5
D807	I-4	Q83	H-16	Q808	D-2
D808	I-9	Q101	C-7	Q811	F-3
D809	I-8	Q102	F-11	Q812	F-3
D810	I-9	Q103	E-6	Q813	F-4
D811	I-9	Q201	C-8	Q814	D-4
D812	I-9	Q202	D-11	Q816	F-2
D813	I-5	Q203	E-6	Q817	F-2
D815	I-5	Q301	C-8	Q818	F-2

• Semiconductor Lead Layouts

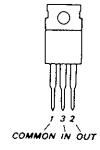
BA3308



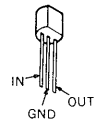
M5F7807



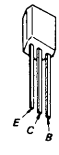
M5F7907



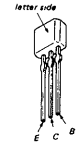
TC4051BPHB



DTA114ES
DTC114ES
DTC143TS
2SC2603-EF

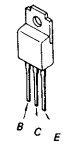


2SA1175-HFE

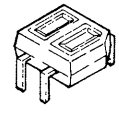


2SB1013-4
2SC2001
2SD1388

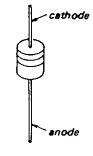
2SD1761-EF



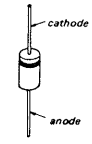
GP-2S09-C



HZS6C3L
1SS120
11EQS04
11ES2

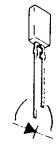


HZ12B2L
1SS132



MPG3877S
SEL3213C-D

SEL4225C-D
SEL4925A-D



SECTION 4
EXPLODED VIEWS

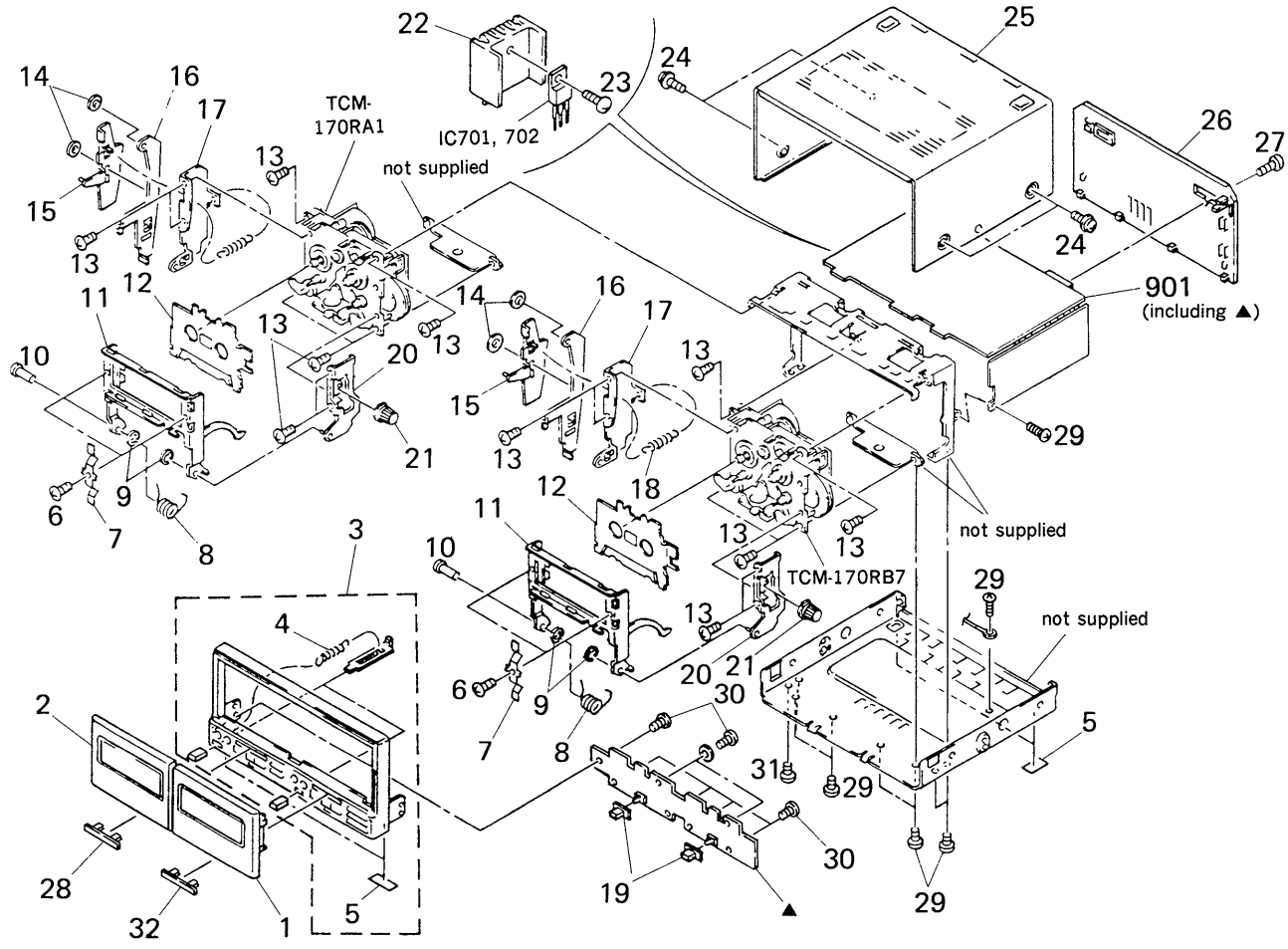
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

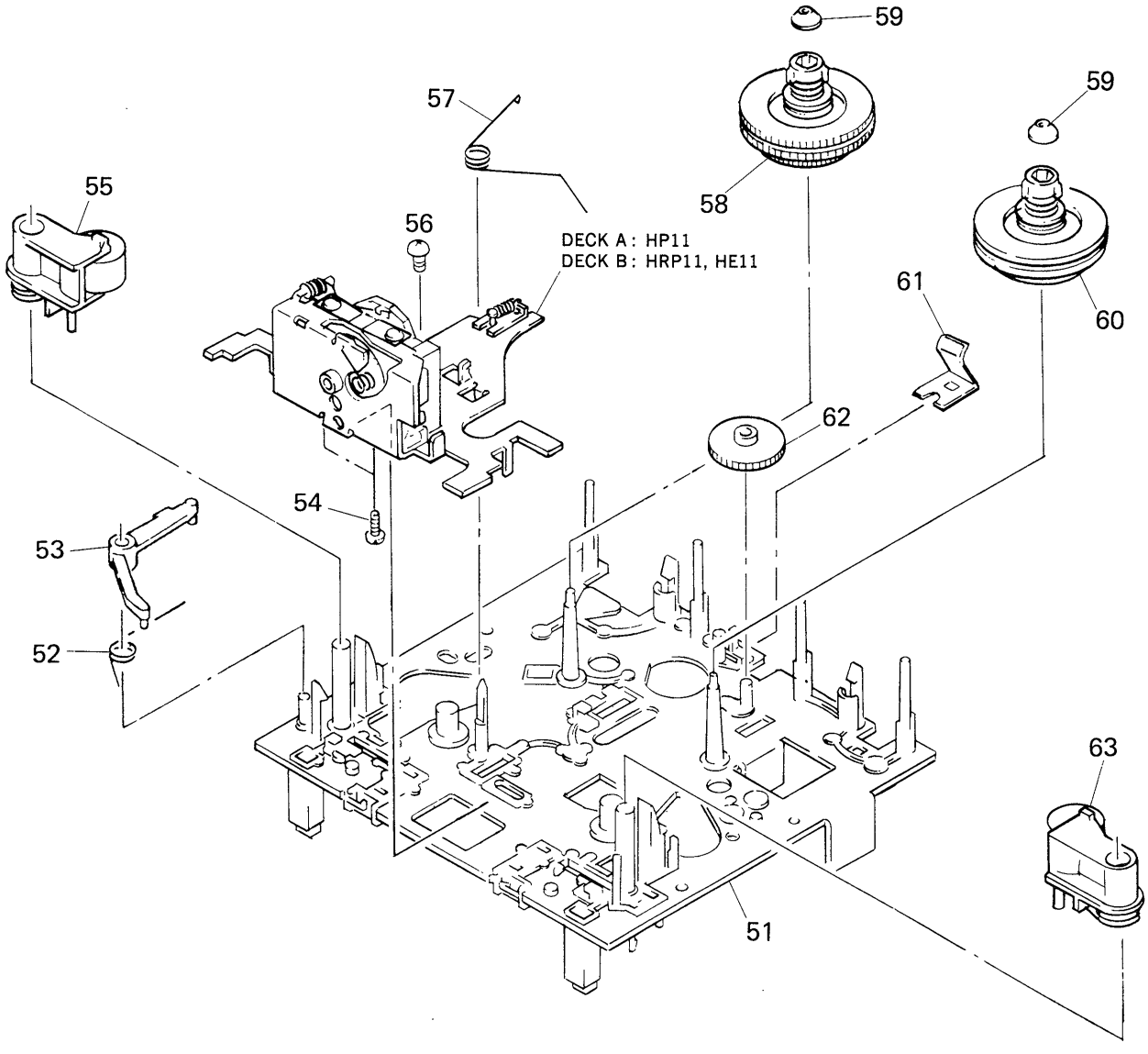
4-1. FRONT PANEL BLOCK



Ref.No	Part No.	Description	Remarks
1	X-3340-199-1	LID (B) ASSY, CASSETTE	
2	X-3340-198-1	LID (A) ASSY, CASSETTE	
3	X-3346-301-1	PANEL ASSY, FRONT	
4	3-567-110-00	SPRING, TENSION	
5	4-930-336-01	FOOT (FELT)	
6	7-621-255-15	SCREW +PTT 2X3 (S)	
7	3-354-908-01	SPRING (CASSETTE RETAINER)	
8	3-346-364-01	SPRING (LOADING), TORSION	
9	7-624-105-04	RETAINING, RING E-2.3	
10	*3-346-334-01	SHAFT (HOLDER FITTING LEFT)	
11	*3-340-150-01	HOLDER, CASSETTE	
12	*3-340-123-01	RETAINER, CASSETTE	
13	7-621-773-86	SCREW +BVTT 2.6X4 (S)	
14	3-558-708-21	WASHER, STOPPER	
15	*X-3332-465-1	LEVER (LOCK) ASSY	
16	*3-340-142-01	LEVER (EJECT)	
17	*X-3332-466-1	BRACKET (L) ASSY	
18	3-343-474-01	SPRING, TENSION	

Ref.No	Part No.	Description	Remarks
19	3-349-054-01	KNOB (SLIDE)	
20	*X-3332-494-1	BRACKET (R) ASSY	
21	X-3340-185-1	GEAR (DAMPER) ASSY	
22	*4-921-402-01	HEAT SINK	
23	7-685-646-79	SCREW BVTP 3X8 TYPE2 IT-3	
24	3-704-366-01	SCREW (CASE) (M3X8)	
25	4-932-841-01	CASE	
26	*3-354-982-01	PANEL, BACK	
27	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
28	3-354-984-01	PLATE (AZIMUTH L), ORNAMENTAL	
29	7-682-547-04	SCREW +BVTT 3X6 (S)	
30	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
31	7-685-870-01	SCREW +BVTT 3X5 (S)	
32	3-354-985-01	PLATE (AZIMUTH R), ORNAMENTAL	
901	*A-2006-231-A	MOUNTED PCB, AUDIO	
IC701	8-759-604-86	IC M5F7807	
IC702	8-759-604-90	IC M5F7907	

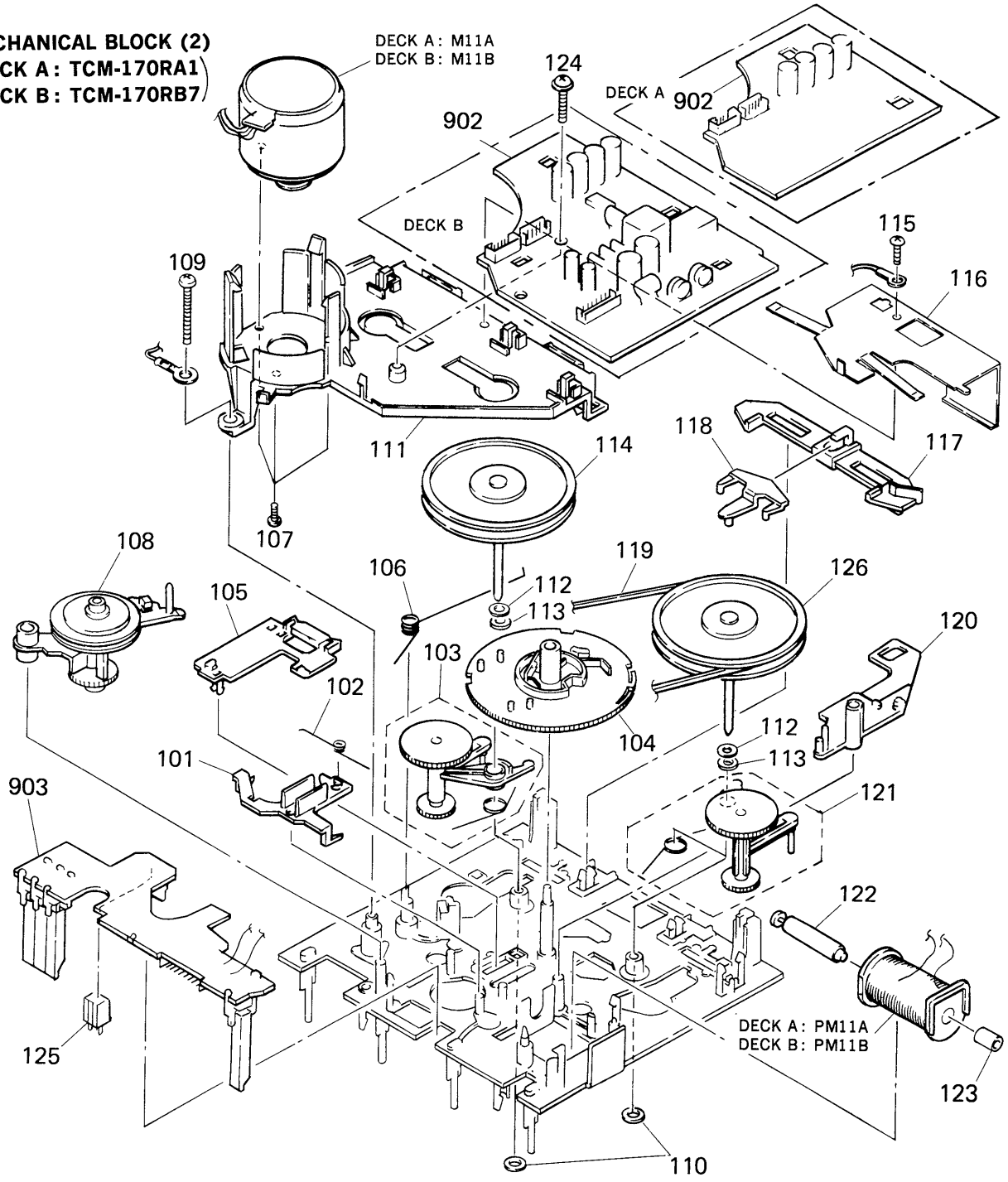
4-2. MECHANICAL BLOCK (1)
(DECK A : TCM-170RA1)
(DECK B : TCM-170RB7)



Ref.No	Part No.	Description	Remarks
51	X-3343-439-1	CHASSIS ASSY, MECHANICAL	
52	3-343-477-01	SPRING, TORSION (EJECT SAFTY)	
53	3-343-476-01	LEVER (EJECT SAFETY LEVER)	
54	7-685-102-19	SCREW +P 2X4 NON-SLIT TYPE 2	
55	X-3343-456-1	LEVER (PINCH R) ASSY	
56	7-621-773-86	SCREW +BVTT 2.6X4 (S)	
57	3-343-401-01	SPRING, TORSION	
58	X-3343-415-1	TABEL (REV) ASSY, REEL	

Ref.No	Part No.	Description	Remarks
59	3-343-439-01	CAP (REEL TABLE)	
60	X-3343-401-1	TABEL ASSY, REEL	
61	3-343-420-01	SPRING, LEAF	
62	3-343-411-01	GEAR (FF GEAR)	
63	X-3343-455-1	LEVER (PINCH F) ASSY	
HP11	A-2003-503-A	(DECK A)....PC BOARD ASSY, HEAD	
HRP11	A-2003-504-A	(DECK B)....CHASSIS ASSY, HEAD	

4-3. MECHANICAL BLOCK (2)
(DECK A : TCM-170RA1)
(DECK B : TCM-170RB7)



Ref.No	Part No.	Description	Remarks
101	3-343-453-01	SLIDER (BRAKE PLATE)	
102	3-343-429-01	SPRING, TORSION	
103	X-3343-454-1	LEVER (TU-R) ASSY	
104	3-343-470-01	GEAR (CAM GEAR)	
105	3-343-461-01	SLIDER	
106	3-343-430-01	SPRING, TORSION	
107	7-627-556-28	SCREW +P 2.6X3.5	
108	X-3343-414-1	LAVER (FR ARM) ASSY	
109	3-355-801-01	SCREW (BTP 2X18)	
110	3-343-473-01	WASHER, NYLON	
111	*X-3343-407-1	BASE (THRUST RETAINER) ASSY	
112	4-605-835-11	WASHER (2.6), POLYSLIDER	
113	3-307-482-00	WASHER, LUMILER	
114	X-3343-411-6	FLYWHEEL COMPLETE ASSY	
115	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
116	3-343-480-01	PLATE, SHIELD	
117	3-343-457-01	SLIDER (REVERSE SLIDER)	

Ref.No	Part No.	Description	Remarks
118	3-343-462-01	LEVER	
119	3-313-816-02	BELT (CAPSTAN BELT SQUARE)	
120	3-343-493-01	LEVER (PM LEVER)	
121	X-3343-453-1	LEVER (TU-F) ASSY	
122	*3-343-425-01	ARBOR(MOVABLE IRON ARBOR),IRON	
123	*3-343-424-01	ARBOR (FIXED IRON ARBOR), IRON	
124	3-343-404-01	SCREW (PTPWH 2X12)	
125	3-343-419-01	HOLDER (S SENSER A)	
126	X-3343-416-7	FLYWHEEL (REV) COMPLETE ASSY	
902	*1-624-146-11	(DESK B)....PC BOARD,MD-B	
902	*1-624-147-11	(DECK A)....PC BOARD, MD-A	
903	*1-624-148-11	PC BOARD, LEAF SW	
M11A	X-3343-447-1	(DECK A)....MOTOR ASSY	
M11B	X-3343-447-1	(DECK B)....MOTOR ASSY	
PM11A	1-454-456-11	(DECK A)....SOLENOID, PLUNGER	
PM11B	1-454-456-11	(DECK B)....SOLENOID, PLUNGER	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description			
901	*A-2006-231-A	MOUNTED PCB, AUDIO			
902	*1-624-146-11	(DESK B)....PC BOARD,MD-B			
902	*1-624-147-11	(DECK A)....PC BOARD, MD-A			
903	*1-624-148-11	PC BOARD, LEAF SW			
		CAPACITOR			
C41A	1-162-289-31	CERAMIC	390PF	10%	50V
C41B	1-162-289-31	CERAMIC	390PF	10%	50V
C42A	1-136-157-00	FILM	0.022MF	5%	50V
C42B	1-136-157-00	FILM	0.022MF	5%	50V
C43A	1-124-282-00	ELECT	22MF	20%	25V
C43B	1-124-282-00	ELECT	22MF	20%	25V
C44	1-162-288-31	CERAMIC	330PF	10%	50V
C45	1-136-273-91	FILM	75PF	5%	630V
C47	1-162-209-31	CERAMIC	27PF	5%	50V
C48A	1-162-217-31	CERAMIC	56PF	5%	50V
C48B	1-162-217-31	CERAMIC	56PF	5%	50V
C61A	1-162-289-31	CERAMIC	390PF	10%	50V
C61B	1-162-289-31	CERAMIC	390PF	10%	50V
C62A	1-136-157-00	FILM	0.022MF	5%	50V
C62B	1-136-157-00	FILM	0.022MF	5%	50V
C63A	1-124-282-00	ELECT	22MF	20%	25V
C63B	1-124-282-00	ELECT	22MF	20%	25V
C64	1-162-288-31	CERAMIC	330PF	10%	50V
C65	1-136-273-91	FILM	75PF	5%	630V
C67	1-162-209-31	CERAMIC	27PF	5%	50V
C68A	1-162-217-31	CERAMIC	56PF	5%	50V
C68B	1-162-217-31	CERAMIC	56PF	5%	50V
C81A	1-126-101-11	ELECT	100MF	20%	16V
C81B	1-126-101-11	ELECT	100MF	20%	16V
C82A	1-126-101-11	ELECT	100MF	20%	16V
C82B	1-126-101-11	ELECT	100MF	20%	16V
C83	1-124-791-11	ELECT	1MF	20%	50V
C84	1-124-925-11	ELECT	2.2MF	20%	50V
C85	1-130-480-00	MYLAR	0.0056MF	5%	50V
C86	1-130-476-00	MYLAR	0.0027MF	5%	50V
C87	1-130-476-00	MYLAR	0.0027MF	5%	50V
C88	1-136-562-11	FILM	0.0082MF	5%	630V
C89	1-136-554-11	FILM	0.0018MF	5%	630V
C89	1-161-494-00	CERAMIC	0.022MF		25V
C90	1-136-553-11	FILM	0.0015MF	5%	630V
C101	1-124-925-11	ELECT	2.2MF	20%	50V
C102	1-162-294-31	CERAMIC	0.001MF	10%	50V
C103	1-124-443-00	ELECT	100MF	20%	10V
C104	1-123-875-11	ELECT	10MF	20%	50V
C105	1-161-375-00	CERAMIC	0.0022MF	20%	16V
C106	1-136-162-00	FILM	0.056MF	5%	50V
C107	1-123-875-11	ELECT	10MF	20%	50V
C108	1-161-375-00	CERAMIC	0.0022MF	20%	16V
C109	1-130-479-00	MYLAR	0.0047MF	5%	50V
C110	1-136-173-00	FILM	0.47MF	5%	50V
C111	1-136-167-00	FILM	0.15MF	5%	50V
C112	1-136-155-00	FILM	0.015MF	5%	50V
C113	1-136-169-00	FILM	0.22MF	5%	50V
C114	1-136-163-00	FILM	0.068MF	5%	50V
C115	1-136-161-00	FILM	0.047MF	5%	50V
C116	1-130-481-00	MYLAR	0.0068MF	5%	50V
C117	1-136-153-00	FILM	0.01MF	5%	50V
C118	1-124-927-11	ELECT	4.7MF	20%	50V
C119	1-124-464-11	ELECT	0.22MF	20%	50V
C120	1-124-927-11	ELECT	4.7MF	20%	50V
C121	1-123-875-11	ELECT	10MF	20%	50V
C122	1-126-233-11	ELECT	22MF	20%	50V
C124	1-123-875-11	ELECT	10MF	20%	50V
C125	1-162-217-31	CERAMIC	56PF	5%	50V
C126	1-126-233-11	ELECT	22MF	20%	50V
C201	1-124-925-11	ELECT	2.2MF	20%	50V
C202	1-162-294-31	CERAMIC	0.001MF	10%	50V
C203	1-124-443-00	ELECT	100MF	20%	10V
C204	1-123-875-11	ELECT	10MF	20%	50V
C205	1-161-375-00	CERAMIC	0.0022MF	20%	16V
C206	1-136-162-00	FILM	0.056MF	5%	50V
C207	1-123-875-11	ELECT	10MF	20%	50V
C208	1-161-375-00	CERAMIC	0.0022MF	20%	16V
C209	1-130-479-00	MYLAR	0.0047MF	5%	50V
C210	1-136-173-00	FILM	0.47MF	5%	50V
C211	1-136-167-00	FILM	0.15MF	5%	50V
C212	1-136-155-00	FILM	0.015MF	5%	50V
C213	1-136-169-00	FILM	0.22MF	5%	50V
C214	1-136-163-00	FILM	0.068MF	5%	50V
C215	1-136-161-00	FILM	0.047MF	5%	50V
C216	1-130-481-00	MYLAR	0.0068MF	5%	50V
C217	1-136-153-00	FILM	0.01MF	5%	50V
C218	1-124-927-11	ELECT	4.7MF	20%	50V
C219	1-124-464-11	ELECT	0.22MF	20%	50V
C220	1-124-927-11	ELECT	4.7MF	20%	50V
C221	1-123-875-11	ELECT	10MF	20%	50V
C222	1-126-233-11	ELECT	22MF	20%	50V
C224	1-123-875-11	ELECT	10MF	20%	50V
C225	1-162-217-31	CERAMIC	56PF	5%	50V
C226	1-126-233-11	ELECT	22MF	20%	50V
C301	1-123-875-11	ELECT	10MF	20%	50V
C302	1-123-875-11	ELECT	10MF	20%	50V
C303	1-123-875-11	ELECT	10MF	20%	50V
C304	1-123-875-11	ELECT	10MF	20%	50V
C305	1-124-477-11	ELECT	47MF	20%	25V
C306	1-124-477-11	ELECT	47MF	20%	25V
C307	1-124-120-11	ELECT	220MF	20%	16V
C308	1-124-120-11	ELECT	220MF	20%	16V
C309	1-123-875-11	ELECT	10MF	20%	50V
C310	1-123-875-11	ELECT	10MF	20%	50V
C311	1-124-443-00	ELECT	100MF	20%	10V
C312	1-126-233-11	ELECT	22MF	20%	50V
C313	1-123-875-11	ELECT	10MF	20%	50V
C314	1-123-875-11	ELECT	10MF	20%	50V
C315	1-124-791-11	ELECT	1MF	20%	50V
C316	1-124-902-00	ELECT	0.47MF	20%	50V
C317	1-162-217-31	CERAMIC	56PF	5%	50V
C318	1-136-157-00	FILM	0.022MF	5%	50V
C319	1-124-925-11	ELECT	2.2MF	20%	50V

REVISED

Ref.No	Part No.	Description			
C320	1-124-925-11	ELECT	2.2MF	20%	50V
C321	1-124-927-11	ELECT	4.7MF	20%	50V
C701	1-164-159-11	CERAMIC	0.1MF		50V
C702	1-164-159-11	CERAMIC	0.1MF		50V
C703	1-124-563-11	ELECT	2200MF	20%	25V
C704	1-124-480-11	ELECT	470MF	20%	25V
C705	1-124-120-11	ELECT	220MF	20%	16V
C706	1-124-360-00	ELECT	1000MF	20%	16V
C707	1-124-477-11	ELECT	47MF	20%	25V
C708	1-124-472-11	ELECT	470MF	20%	10V
C709	1-164-159-11	CERAMIC	0.1MF		50V
C710	1-164-159-11	CERAMIC	0.1MF		50V
C711	1-124-472-11	ELECT	470MF	20%	10V
C712	1-164-159-11	CERAMIC	0.1MF		50V
C713	1-164-159-11	CERAMIC	0.1MF		50V
C714	1-124-472-11	ELECT	470MF	20%	10V
C715	1-124-791-11	ELECT	1MF	20%	50V
C716	1-124-482-11	ELECT	33MF	20%	25V
C717	1-162-294-31	CERAMIC	0.001MF	10%	50V
C801	1-161-494-00	CERAMIC	0.022MF		25V
C802	1-161-494-00	CERAMIC	0.022MF		25V
C803	1-124-443-00	ELECT	100MF	20%	10V
C804	1-161-494-00	CERAMIC	0.022MF		25V
C805	1-161-494-00	CERAMIC	0.022MF		25V
C806	1-162-199-31	CERAMIC	10PF	5%	50V
C807	1-162-199-31	CERAMIC	10PF	5%	50V
C808	1-162-199-31	CERAMIC	10PF	5%	50V
C809	1-126-176-11	ELECT	220MF	20%	10V
C810	1-124-925-11	ELECT	2.2MF	20%	50V
C811	1-124-927-11	ELECT	4.7MF	20%	50V
C812	1-124-925-11	ELECT	2.2MF	20%	50V
C813	1-164-159-11	CERAMIC	0.1MF		50V
C814	1-162-199-31	CERAMIC	10PF	5%	50V
CN84	*1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
CNP11A	1-564-501-11	PIN, CONNECTOR 8P			
CNP11B	1-506-615-11	PIN, CONNECTOR 9P			
CNP12A	*1-564-337-00	PIN, CONNECTOR 3P			
CNP12B	*1-564-337-61	PIN, CONNECTOR 3P			
CNP13A	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CNP13B	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CNP81A	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CNP81B	*1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
CNP82A	*1-564-339-00	PIN, CONNECTOR 5P			
CNP82B	*1-564-339-61	PIN, CONNECTOR 5P			
CNP83	*1-564-338-61	PIN, CONNECTOR 4P			
CNP84	*1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
CNP301	*1-569-624-11	SOCKET, CONNECTOR 17P			
CNP801	*1-564-338-00	PIN, CONNECTOR 4P			
CNP802	*1-564-337-00	PIN, CONNECTOR 3P			
CNP803	*1-564-338-61	PIN, CONNECTOR 4P			
CNP804	*1-564-337-71	PIN, CONNECTOR 3P			
D11A	8-719-107-94	DIODE 1SS132			
D11B	8-719-107-94	DIODE 1SS132			
D81	8-719-107-94	DIODE 1SS132			
D301	8-719-912-20	DIODE 1SS120			
D304	8-719-912-20	DIODE 1SS120			
D701	8-719-200-82	DIODE 11ES2			
D702	8-719-200-82	DIODE 11ES2			
D703	8-719-200-82	DIODE 11ES2			
D704	8-719-200-82	DIODE 11ES2			
D705	8-719-912-20	DIODE 1SS120			
D706	8-719-912-20	DIODE 1SS120			
D709	8-719-910-25	DIODE HZ12B2L			
D710	8-719-933-41	DIODE HZS6C3L			

Ref.No	Part No.	Description
D711	8-719-210-21	DIODE 11EQS04
D801	8-719-200-82	DIODE 11ES2
D802	8-719-200-82	DIODE 11ES2
D803	8-719-200-82	DIODE 11ES2
D804	8-719-912-20	DIODE 1SS120
D805	8-719-912-20	DIODE 1SS120
D806	8-719-942-15	DIODE MPG3877S
D807	8-719-942-15	DIODE MPG3877S
D808	8-719-942-15	DIODE MPG3877S
D809	8-719-942-15	DIODE MPG3877S
D810	8-719-310-04	DIODE SEL4925A-D
D811	8-719-312-38	DIODE SEL4225C-D
D812	8-719-942-15	DIODE MPG3877S
D813	8-719-311-05	DIODE SEL3213C-D
D815	8-719-311-05	DIODE SEL3213C-D
HP11	A-2003-503-A	(DECK A)....PC BOARD ASSY, HEAD
HRP11	A-2003-504-A	(DECK B)....CHASSIS ASSY, HEAD
IC81A	8-759-111-44	IC UPC4570C-1
IC81B	8-759-111-44	IC UPC4570C-1
IC301	8-759-939-73	IC BA3308
IC302	8-752-018-70	IC CX20187
IC303	8-752-033-61	IC CXA1198AP
IC304	8-759-208-06	IC TC4051BPHB
IC305	8-759-040-53	IC MC14053BCP
IC306	8-759-945-58	IC RC4558P
IC307	8-759-945-58	IC RC4558P
IC308	8-759-040-53	IC MC14053BCP
IC701	8-759-604-86	IC M5F7807
IC702	8-759-604-90	IC M5F7907
IC801	8-759-635-01	IC M50964-223SP
L41	1-410-780-11	INDUCTOR 27MMH
L61	1-410-780-11	INDUCTOR 27MMH
L801	1-408-080-00	INDUCTOR 100UH
LPF101	1-236-087-11	FILTER, LOW PASS
LPF201	1-236-087-11	FILTER, LOW PASS
M11A	X-3343-447-1	(DECK A)....MOTOR ASSY
M11B	X-3343-447-1	(DECK B)....MOTOR ASSY
PM11A	1-454-456-11	(DECK A)....SOLENOID, PLUNGER
PM11B	1-454-456-11	(DECK B)....SOLENOID, PLUNGER
Q11A	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q11B	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q12A	8-719-939-23	PHOTO TRANSISTOR GP2S09-C
Q12B	8-719-939-23	PHOTO TRANSISTOR GP2S09-C
Q81	8-729-111-29	TRANSISTOR 2SD1616A-K
Q82	8-729-100-13	TRANSISTOR 2SC2001
Q83	8-729-100-13	TRANSISTOR 2SC2001
Q101	8-729-900-74	TRANSISTOR DTC143TS
Q102	8-729-620-05	TRANSISTOR 2SC2603-EF
Q103	8-729-900-74	TRANSISTOR DTC143TS
Q201	8-729-900-74	TRANSISTOR DTC143TS
Q202	8-729-620-05	TRANSISTOR 2SC2603-EF
Q203	8-729-900-74	TRANSISTOR DTC143TS
Q301	8-729-900-80	TRANSISTOR DTC114ES
Q302	8-729-900-61	TRANSISTOR DTA114ES
Q303	8-729-900-74	TRANSISTOR DTC143TS
Q304	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q305	8-729-900-61	TRANSISTOR DTA114ES
Q306	8-729-900-61	TRANSISTOR DTA114ES
Q307	8-729-900-61	TRANSISTOR DTA114ES
Q308	8-729-900-61	TRANSISTOR DTA114ES
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF
Q702	8-729-920-98	TRANSISTOR 2SD1761-EF

Ref.No	Part No.	Description
Q703	8-729-620-05	TRANSISTOR 2SC2603-EF
Q704	8-729-920-98	TRANSISTOR 2SD1761-EF
Q705	8-729-620-05	TRANSISTOR 2SC2603-EF
Q706	8-729-620-05	TRANSISTOR 2SC2603-EF
Q801	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q802	8-729-801-84	TRANSISTOR 2SB1013-4
Q803	8-729-801-84	TRANSISTOR 2SB1013-4
Q804	8-729-801-84	TRANSISTOR 2SB1013-4
Q805	8-729-801-84	TRANSISTOR 2SB1013-4
Q806	8-729-801-84	TRANSISTOR 2SB1013-4
Q807	8-729-900-61	TRANSISTOR DTA114ES
Q808	8-729-900-61	TRANSISTOR DTA114ES
Q811	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q812	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q813	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q814	8-729-900-80	TRANSISTOR DTC114ES
Q816	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q817	8-729-900-61	TRANSISTOR DTA114ES
Q818	8-729-900-80	TRANSISTOR DTC114ES

RESISTOR

Ref.No	Part No.	Description				
R11B	1-247-834-11	CARBON	1.3K	5%	1/4W	
R12B	1-249-414-11	CARBON	560	5%	1/4W	
R13B	1-247-818-11	CARBON	300	5%	1/4W	
R14A	1-249-408-11	CARBON	180	5%	1/4W	
R14B	1-249-408-11	CARBON	180	5%	1/4W	
R17A	1-249-437-11	CARBON	47K	5%	1/4W	
R17B	1-249-437-11	CARBON	47K	5%	1/4W	
R18A	1-249-437-11	CARBON	47K	5%	1/4W	
R18B	1-249-437-11	CARBON	47K	5%	1/4W	
R41A	1-247-881-00	CARBON	120K	5%	1/4W	
R41B	1-247-881-00	CARBON	120K	5%	1/4W	
R42A	1-249-405-11	CARBON	100	5%	1/4W	
R42B	1-249-405-11	CARBON	100	5%	1/4W	
R43A	1-247-882-11	CARBON	130K	5%	1/4W	
R43B	1-247-882-11	CARBON	130K	5%	1/4W	
R44A	1-249-426-11	CARBON	5.6K	5%	1/4W	
R44B	1-249-426-11	CARBON	5.6K	5%	1/4W	
R45	1-249-430-11	CARBON	12K	5%	1/4W	
R61A	1-247-881-00	CARBON	120K	5%	1/4W	
R61B	1-247-881-00	CARBON	120K	5%	1/4W	
R62A	1-249-405-11	CARBON	100	5%	1/4W	
R62B	1-249-405-11	CARBON	100	5%	1/4W	
R63A	1-247-882-11	CARBON	130K	5%	1/4W	
R63B	1-247-882-11	CARBON	130K	5%	1/4W	
R64A	1-249-426-11	CARBON	5.6K	5%	1/4W	
R64B	1-249-426-11	CARBON	5.6K	5%	1/4W	
R65	1-249-430-11	CARBON	12K	5%	1/4W	
R81A	1-249-409-11	CARBON	220	5%	1/4W	
R81B	1-249-409-11	CARBON	220	5%	1/4W	
R82A	1-249-409-11	CARBON	220	5%	1/4W	
R82B	1-249-409-11	CARBON	220	5%	1/4W	
R83	1-249-429-11	CARBON	10K	5%	1/4W	
R84	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R85	1-249-435-11	CARBON	33K	5%	1/4W	
R86	1-249-435-11	CARBON	33K	5%	1/4W	
R101	1-247-866-11	CARBON	30K	5%	1/4W	
R102	1-249-417-11	CARBON	1K	5%	1/4W	
R103	1-249-437-11	CARBON	47K	5%	1/4W	
R104	1-249-417-11	CARBON	1K	5%	1/4W	
R105	1-249-423-11	CARBON	3.3K	5%	1/4W	
R106	1-249-426-11	CARBON	5.6K	5%	1/4W	
R107	1-247-834-11	CARBON	1.3K	5%	1/4W	
R108	1-249-418-11	CARBON	1.2K	5%	1/4W	
R109	1-249-423-11	CARBON	3.3K	5%	1/4W	
R110	1-247-834-11	CARBON	1.3K	5%	1/4W	

Ref.No	Part No.	Description				
R111	1-247-887-00	CARBON	220K	5%	1/4W	
R112	1-249-417-11	CARBON	1K	5%	1/4W	
R113	1-249-441-11	CARBON	100K	5%	1/4W	
R114	1-249-441-11	CARBON	100K	5%	1/4W	
R115	1-249-424-11	CARBON	3.9K	5%	1/4W	
R116	1-247-842-11	CARBON	3K	5%	1/4W	
R117	1-247-822-11	CARBON	430	5%	1/4W	
R118	1-249-427-11	CARBON	6.8K	5%	1/4W	
R119	1-249-415-11	CARBON	680	5%	1/4W	
R120	1-249-429-11	CARBON	10K	5%	1/4W	
R121	1-249-428-11	CARBON	8.2K	5%	1/4W	
R122	1-249-421-11	CARBON	2.2K	5%	1/4W	
R123	1-249-429-11	CARBON	10K	5%	1/4W	
R124	1-249-417-11	CARBON	1K	5%	1/4W	
R125	1-249-420-11	CARBON	1.8K	5%	1/4W	
R126	1-247-842-11	CARBON	3K	5%	1/4W	
R127	1-249-411-11	CARBON	330	5%	1/4W	
R128	1-249-441-11	CARBON	100K	5%	1/4W	
R129	1-249-417-11	CARBON	1K	5%	1/4W	
R130	1-249-441-11	CARBON	100K	5%	1/4W	
R131	1-249-436-11	CARBON	39K	5%	1/4W	
R132	1-249-420-11	CARBON	1.8K	5%	1/4W	
R133	1-249-441-11	CARBON	100K	5%	1/4W	
R201	1-247-866-11	CARBON	30K	5%	1/4W	
R202	1-249-417-11	CARBON	1K	5%	1/4W	
R203	1-249-437-11	CARBON	47K	5%	1/4W	
R204	1-249-417-11	CARBON	1K	5%	1/4W	
R205	1-249-423-11	CARBON	3.3K	5%	1/4W	
R206	1-249-426-11	CARBON	5.6K	5%	1/4W	
R207	1-247-834-11	CARBON	1.3K	5%	1/4W	
R208	1-249-418-11	CARBON	1.2K	5%	1/4W	
R209	1-249-423-11	CARBON	3.3K	5%	1/4W	
R210	1-247-834-11	CARBON	1.3K	5%	1/4W	
R211	1-247-887-00	CARBON	220K	5%	1/4W	
R212	1-249-417-11	CARBON	1K	5%	1/4W	
R213	1-249-441-11	CARBON	100K	5%	1/4W	
R214	1-249-441-11	CARBON	100K	5%	1/4W	
R215	1-249-424-11	CARBON	3.9K	5%	1/4W	
R216	1-247-842-11	CARBON	3K	5%	1/4W	
R217	1-247-822-11	CARBON	430	5%	1/4W	
R218	1-249-427-11	CARBON	6.8K	5%	1/4W	
R219	1-249-415-11	CARBON	680	5%	1/4W	
R220	1-249-429-11	CARBON	10K	5%	1/4W	
R221	1-249-428-11	CARBON	8.2K	5%	1/4W	
R222	1-249-421-11	CARBON	2.2K	5%	1/4W	
R223	1-249-429-11	CARBON	10K	5%	1/4W	
R224	1-249-417-11	CARBON	1K	5%	1/4W	
R225	1-249-420-11	CARBON	1.8K	5%	1/4W	
R226	1-247-842-11	CARBON	3K	5%	1/4W	
R227	1-249-411-11	CARBON	330	5%	1/4W	
R228	1-249-441-11	CARBON	100K	5%	1/4W	
R229	1-249-417-11	CARBON	1K	5%	1/4W	
R230	1-249-441-11	CARBON	100K	5%	1/4W	
R231	1-249-436-11	CARBON	39K	5%	1/4W	
R232	1-249-420-11	CARBON	1.8K	5%	1/4W	
R233	1-249-441-11	CARBON	100K	5%	1/4W	
R301 ⚠	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R302	1-249-429-11	CARBON	10K	5%	1/4W	
R303	1-249-423-11	CARBON	3.3K	5%	1/4W	
R304	1-247-834-11	CARBON	1.3K	5%	1/4W	
R305	1-249-435-11	CARBON	33K	5%	1/4W	
R306	1-249-433-11	CARBON	22K	5%	1/4W	
R307	1-249-409-11	CARBON	220	5%	1/4W	
R308	1-249-409-11	CARBON	220	5%	1/4W	
R309	1-249-429-11	CARBON	10K	5%	1/4W	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description				
R310	1-249-417-11	CARBON	1K	5%	1/4W	
R311	1-259-880-11	CARBON	2.2M	5%	1/4W	
R313	1-249-405-11	CARBON	100	5%	1/4W	
R314	1-249-409-11	CARBON	220	5%	1/4W	
R315	1-249-441-11	CARBON	100K	5%	1/4W	
R316	1-249-441-11	CARBON	100K	5%	1/4W	
R317	1-249-411-11	CARBON	330	5%	1/4W	
R318	1-249-437-11	CARBON	47K	5%	1/4W	
R319	1-215-469-00	METAL	100K	1%	1/6W	
R320	1-249-433-11	CARBON	22K	5%	1/4W	
R321	1-249-441-11	CARBON	100K	5%	1/4W	
R322	1-249-429-11	CARBON	10K	5%	1/4W	
R323	1-249-429-11	CARBON	10K	5%	1/4W	
R325	1-247-864-11	CARBON	24K	5%	1/4W	
R332	1-247-862-11	CARBON	20K	5%	1/4W	
R333	1-247-868-11	CARBON	36K	5%	1/4W	
R334	1-249-434-11	CARBON	27K	5%	1/4W	
R335	1-247-874-11	CARBON	62K	5%	1/4W	
R336	1-247-870-11	CARBON	43K	5%	1/4W	
R337	1-247-881-00	CARBON	120K	5%	1/4W	
R338	1-249-437-11	CARBON	47K	5%	1/4W	
R339	1-247-872-11	CARBON	51K	5%	1/4W	
R340	1-249-437-11	CARBON	47K	5%	1/4W	
R341	1-249-438-11	CARBON	56K	5%	1/4W	
R342	1-249-437-11	CARBON	47K	5%	1/4W	
R343	1-247-881-00	CARBON	120K	5%	1/4W	
R344	1-247-872-11	CARBON	51K	5%	1/4W	
R345	1-247-874-11	CARBON	62K	5%	1/4W	
R346	1-249-434-11	CARBON	27K	5%	1/4W	
R347	1-249-437-11	CARBON	47K	5%	1/4W	
R348	1-249-438-11	CARBON	56K	5%	1/4W	
R349	1-247-880-11	CARBON	110K	5%	1/4W	
R350	1-249-435-11	CARBON	33K	5%	1/4W	
R351	1-249-435-11	CARBON	33K	5%	1/4W	
R352	1-249-439-11	CARBON	68K	5%	1/4W	
R353	1-247-885-00	CARBON	180K	5%	1/4W	
R354	1-247-874-11	CARBON	62K	5%	1/4W	
R355	1-249-441-11	CARBON	100K	5%	1/4W	
R356	1-249-439-11	CARBON	68K	5%	1/4W	
R357	1-249-437-11	CARBON	47K	5%	1/4W	
R358	1-247-880-11	CARBON	110K	5%	1/4W	
R359	1-247-885-00	CARBON	180K	5%	1/4W	
R360	1-247-874-11	CARBON	62K	5%	1/4W	
R361	1-247-883-00	CARBON	150K	5%	1/4W	
R362	1-249-439-11	CARBON	68K	5%	1/4W	
R363	1-249-438-11	CARBON	56K	5%	1/4W	
R364	1-249-437-11	CARBON	47K	5%	1/4W	
R365	1-247-876-11	CARBON	75K	5%	1/4W	
R366	1-247-880-11	CARBON	110K	5%	1/4W	
R367	1-247-887-00	CARBON	220K	5%	1/4W	
R368	1-247-887-00	CARBON	220K	5%	1/4W	
R369	1-247-887-00	CARBON	220K	5%	1/4W	
R370	1-249-441-11	CARBON	100K	5%	1/4W	
R371	1-249-429-11	CARBON	10K	5%	1/4W	
R372	1-249-428-11	CARBON	8.2K	5%	1/4W	
R373	1-249-423-11	CARBON	3.3K	5%	1/4W	
R374	1-249-441-11	CARBON	100K	5%	1/4W	
R375	1-249-441-11	CARBON	100K	5%	1/4W	
R376	1-249-417-11	CARBON	1K	5%	1/4W	
R377	1-249-429-11	CARBON	10K	5%	1/4W	
R378	1-249-441-11	CARBON	100K	5%	1/4W	
R379	1-249-417-11	CARBON	1K	5%	1/4W	
R701 ⚠	1-219-108-11	FUSIBLE	1.5	5%	1W	F
R702	1-249-423-11	CARBON	3.3K	5%	1/4W	
R703	1-249-417-11	CARBON	1K	5%	1/4W	

Ref.No	Part No.	Description				
R704 ⚠	1-219-109-11	FUSIBLE	3.9	5%	1W	F
R705 ⚠	1-219-110-11	FUSIBLE	150	5%	1W	F
R706 ⚠	1-219-110-11	FUSIBLE	150	5%	1W	F
R707	1-249-425-11	CARBON	4.7K	5%	1/4W	
R708	1-249-417-11	CARBON	1K	5%	1/4W	
R709	1-249-419-11	CARBON	1.5K	5%	1/4W	
R710	1-249-428-11	CARBON	8.2K	5%	1/4W	
R711	1-249-420-11	CARBON	1.8K	5%	1/4W	
R712	1-249-431-11	CARBON	15K	5%	1/4W	
R713	1-249-399-11	CARBON	33	5%	1/4W	
R715	1-249-405-11	CARBON	100	5%	1/4W	
R716	1-249-405-11	CARBON	100	5%	1/4W	
R800	1-249-407-11	CARBON	150	5%	1/4W	
R801	1-249-429-11	CARBON	10K	5%	1/4W	
R802	1-247-903-00	CARBON	1M	5%	1/4W	
R803	1-249-420-11	CARBON	1.8K	5%	1/4W	
R804	1-249-425-11	CARBON	4.7K	5%	1/4W	
R805	1-249-417-11	CARBON	1K	5%	1/4W	
R806	1-249-433-11	CARBON	22K	5%	1/4W	
R807	1-249-421-11	CARBON	2.2K	5%	1/4W	
R808	1-249-425-11	CARBON	4.7K	5%	1/4W	
R809	1-249-393-11	CARBON	10	5%	1/4W	
R810	1-249-420-11	CARBON	1.8K	5%	1/4W	
R811	1-249-425-11	CARBON	4.7K	5%	1/4W	
R812	1-249-421-11	CARBON	2.2K	5%	1/4W	
R813	1-249-425-11	CARBON	4.7K	5%	1/4W	
R814	1-249-393-11	CARBON	10	5%	1/4W	
R815	1-249-420-11	CARBON	1.8K	5%	1/4W	
R816	1-249-425-11	CARBON	4.7K	5%	1/4W	
R817	1-249-417-11	CARBON	1K	5%	1/4W	
R818	1-249-421-11	CARBON	2.2K	5%	1/4W	
R819	1-249-421-11	CARBON	2.2K	5%	1/4W	
R820	1-249-421-11	CARBON	2.2K	5%	1/4W	
R824	1-249-425-11	CARBON	4.7K	5%	1/4W	
R825	1-249-425-11	CARBON	4.7K	5%	1/4W	
R826	1-249-425-11	CARBON	4.7K	5%	1/4W	
R827	1-249-425-11	CARBON	4.7K	5%	1/4W	
R828	1-249-437-11	CARBON	47K	5%	1/4W	
R829	1-249-425-11	CARBON	4.7K	5%	1/4W	
R830	1-249-437-11	CARBON	47K	5%	1/4W	
R831	1-249-425-11	CARBON	4.7K	5%	1/4W	
R832	1-249-437-11	CARBON	47K	5%	1/4W	
R833	1-249-429-11	CARBON	10K	5%	1/4W	
R834	1-247-895-00	CARBON	470K	5%	1/4W	
R835	1-247-895-00	CARBON	470K	5%	1/4W	
R836	1-249-413-11	CARBON	470	5%	1/4W	
R838	1-249-413-11	CARBON	470	5%	1/4W	
R839	1-249-407-11	CARBON	150	5%	1/4W	
R840	1-249-407-11	CARBON	150	5%	1/4W	
R841	1-249-407-11	CARBON	150	5%	1/4W	
R842	1-249-407-11	CARBON	150	5%	1/4W	
R843	1-249-407-11	CARBON	150	5%	1/4W	
R844	1-249-411-11	CARBON	330	5%	1/4W	
R845	1-249-413-11	CARBON	470	5%	1/4W	
R846	1-249-429-11	CARBON	10K	5%	1/4W	
R847	1-249-429-11	CARBON	10K	5%	1/4W	
R848	1-249-429-11	CARBON	10K	5%	1/4W	
R849	1-249-412-11	CARBON	390	5%	1/4W	
R851	1-249-416-11	CARBON	820	5%	1/4W	
R852	1-249-412-11	CARBON	390	5%	1/4W	
R853	1-249-411-11	CARBON	330	5%	1/4W	
R854	1-249-418-11	CARBON	1.2K	5%	1/4W	
R855	1-249-417-11	CARBON	1K	5%	1/4W	
R856	1-249-426-11	CARBON	5.6K	5%	1/4W	
R857	1-249-430-11	CARBON	12K	5%	1/4W	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description			
R858	1-249-407-11	CARBON	150	5%	1/4W
R859	1-249-409-11	CARBON	220	5%	1/4W
R860	1-249-411-11	CARBON	330	5%	1/4W
R862	1-247-832-11	CARBON	1.1K	5%	1/4W
R863	1-249-417-11	CARBON	1K	5%	1/4W
R864	1-249-420-11	CARBON	1.8K	5%	1/4W
R865	1-249-424-11	CARBON	3.9K	5%	1/4W
R866	1-249-430-11	CARBON	12K	5%	1/4W
R867	1-249-425-11	CARBON	4.7K	5%	1/4W
RV41A	1-228-989-00	RES, ADJ, CARBON 470			
RV41B	1-228-989-00	RES, ADJ, CARBON 470			
RV42	1-230-500-11	RES, ADJ, CARBON 220K			
RV61A	1-228-989-00	RES, ADJ, CARBON 470			
RV61B	1-228-989-00	RES, ADJ, CARBON 470			
RV62	1-230-500-11	RES, ADJ, CARBON 220K			
RV101	1-228-995-00	RES, ADJ, CARBON 22K			
RV201	1-228-995-00	RES, ADJ, CARBON 22K			
RY81	1-515-614-11	RELAY			
S11A	1-571-281-21	SWITCH, LEAF (HALF DET)			
S11B	1-571-281-21	SWITCH, LEAF (HALF DET)			
S12B	1-571-281-21	SWITCH, LEAF (ERASE PROOF (A))			
S13B	1-571-281-21	SWITCH, LEAF (ERASE PROOF (B))			
S14A	1-571-281-21	SWITCH, LEAF (CrO_2)			
S14B	1-571-281-21	SWITCH, LEAF (CrO_2)			
S15B	1-571-281-21	SWITCH, LEAF (METAL)			
S301	1-554-798-31	SWITCH, SLIDE (ISS)			
S302	1-570-835-11	SWITCH, SLIDE (DOLBY NR)			
S801	1-572-184-11	SWITCH, KEYBOARD (DECK A : □)			
S802	1-572-184-11	SWITCH, KEYBOARD (DECK A : ▷)			
S803	1-572-184-11	SWITCH, KEYBOARD (DECK A : ◁)			
S804	1-572-184-11	SWITCH, KEYBOARD (DECK A : ◀◀)			
S805	1-572-184-11	SWITCH, KEYBOARD (DECK A : ▶▶)			
S806	1-572-184-11	SWITCH, KEYBOARD (DECK B : □)			
S807	1-572-184-11	SWITCH, KEYBOARD (PAUSE)			
S808	1-572-184-11	SWITCH, KEYBOARD (DECK B : ▷)			
S809	1-572-184-11	SWITCH, KEYBOARD (DECK B : ◁)			
S811	1-572-184-11	SWITCH, KEYBOARD (DECK B : ◀◀)			
S812	1-572-184-11	SWITCH, KEYBOARD (DECK B : ▶▶)			
S813	1-572-184-11	SWITCH, KEYBOARD (REC)			
S814	1-572-184-11	SWITCH, KEYBOARD (ASM/BLANK SKIP)			
S815	1-572-184-11	SWITCH, KEYBOARD (HIGH SPEED)			
S817	1-572-184-11	SWITCH, KEYBOARD (CD SYNCHRO)			
S818	1-570-835-11	SWITCH, SLIDE (DIRECTION MODE)			
SPK101	1-235-186-00	ENCAPSULATED COMPONENT			
SPK201	1-235-186-00	ENCAPSULATED COMPONENT			
T81	1-433-337-11	TRANSFORMER, BIAS OSCILLATION			
X801	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			

9-955-669-11
(Including 9-955-669-91)

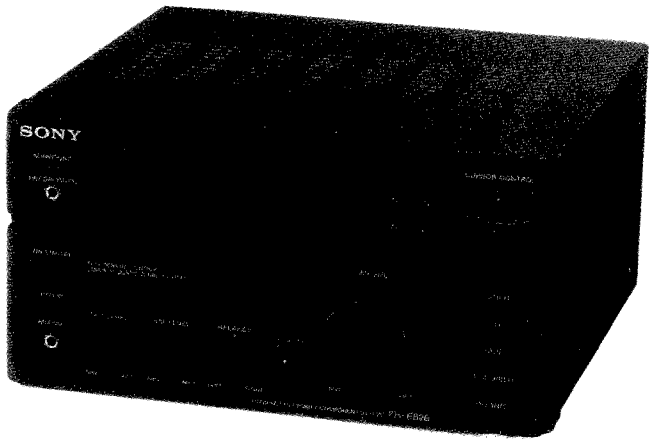
Sony Corporation
Audio Group

English
90C0482-1
Printed in Japan
© 1990. 3
Published by Customer Relations and Service Group

TA-H200/H300

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
Australian Model
TA-H300
E Model
TA-H200/H300



TA-H200 is the amplifier section in FH-E929.
TA-H300 is the amplifier section in MHC-3500/FH-E828.

Photo : TA-H300

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (for US, Canadian model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads both channels driven, from 50—20,000Hz; rated 30 watts per channel minimum RMS power, with no mote than 1% total harmonic distortion from 250 milliwatts to rated output.

Continuous RMS power output (AEP, UK, West Germany, Italian, E, Saudi Arabia, Australian model) 45+45 watts (6 ohms, at 1kHz, 5% THD)

Input	Sensitivity	Impedance
AUX (phono jacks)	450mV	50 kilohms
CD (E, Saudi Arabia, Australian model) (phono jacks)		
MIC (minijack)	1mV	600 ohms
PHONO (phono jacks)	2.5mV	47 kilohms

Outputs

HEADPHONES (stereo minijack)	Accepts headphones of 8 ohms or more.
SPEAKER	Accepts speakers of 6 to 16 ohms.

Power requirements

US, Canadian model: 120V AC, 60Hz
AEP, West Gerrmany, Italian model: 220V, 50/60Hz
UK model: 240V, 50Hz
E, Saudi Arabia, Australian moodel: 120, 220 or 240 V AC adjustable, 50/60Hz

Power consumption		TA-H300
US model		120W
Canadian model		170W
AEP, West Germany Italian model		120W
UK model		230W
E, Saudei Arabia, Australian model	100W	110W

MICROFILM

INTEGRATED STEREO AMPLIFIER

SONY®

SECTION 1
SERVICING NOTES

TABLE OF CONTENTS

Section	Title	Page
1.	SERVICING NOTES	2
2.	GENERAL	
2-1.	Function of Controls	4
3.	DIAGRAMS	
3-1.	Circuit Boards Location	5
3-2.	Semiconductor Lead Layouts	5
3-3.	IC Block Diagrams	6
3-4.	Printed Wiring Boards	7
3-5.	Schematic Digram —Audio Section—	11
3-6.	Schematic Digram —Control Section—	15
3-7.	Schematic Digram —Power Section—	19
4.	EXPLODED VIEWS	
4-1.	Case, Front Panel	22
4-2.	Chassis	23
5.	ELECTRICAL PARTS LIST	24

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

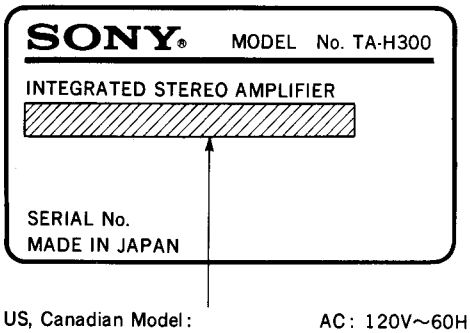
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION

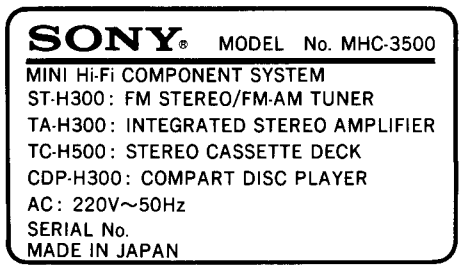
—Specification Label—

TA-H300

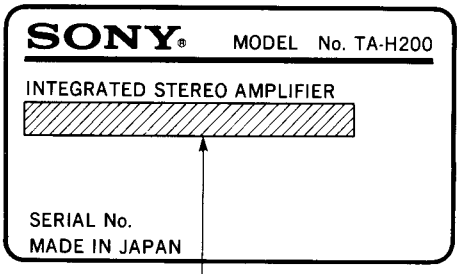


US, Canadian Model: AC: 120V~60H
AEP Model: AC: 220V~50/60Hz
Italian Model: AC: 220V~50Hz
UK Model: AC: 240V~50Hz
E, Saudi Aradia, Austraiian Model: AC: 120/220/240V~50/60Hz 110W

West Germany Model:



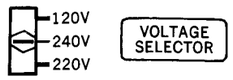
TA-H200



E, Saudi Arabia Model: AC: 120/220/240V~50/60Hz 100W

On operating voltage

Before operating the unit, check that the operating voltage of your unit is identical with the voltage of your local power supply.

Where purchased	Operating voltage
US, Canadian Model	120V AC
UK Model	240V AC
AEP, West Germany, Italian Model	220V AC
E, Saudi Arabia, Australian Model	120V, 220V or 240V AC adjustable by AC voltage selector 

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

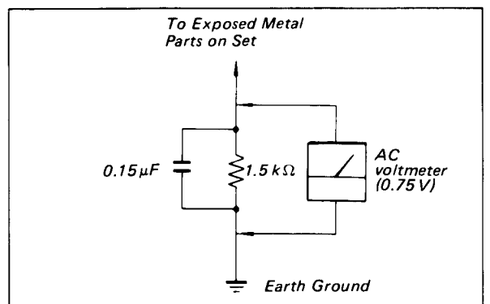
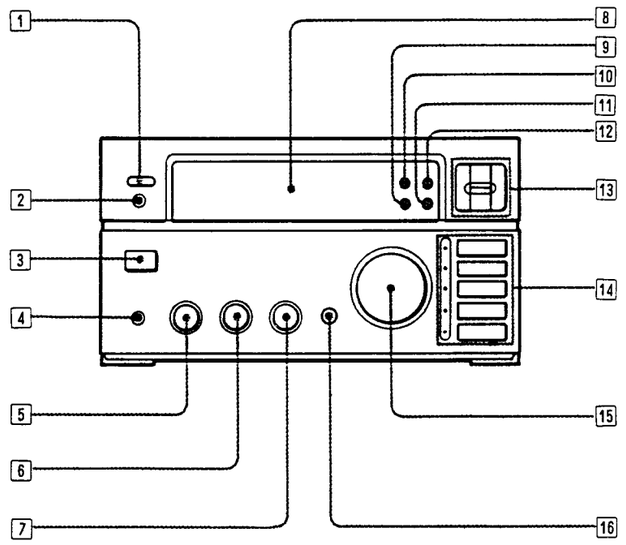


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 2
GENERAL

2-1. FUNCTION OF CONTROLS

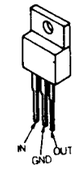


1 SURROUND button
2 HEADPHONES jack
(stereo minijack)
3 SYSTEM POWER Switch and
STANDBY indicator
It remains lit as long as the AC power cord is connected to a wall outlet.
4 MIX MIC (microphone) input jack
5 MIC (microphone) LEVEL control
6 DBFB LEVEL (Dynamic Bass Feedback) control **(US, CND, AEP, UK, WG, IT model)**
SAT control (E, EA, AUS, model)
7 BALANCE control
8 Display window
9 MEMORY button
10 DISPLAY button
11 CURSOR PRESET/EQ button
12 EQUALIZATION button
13 CURSOR CONTROL buttons
14 Function selectors
15 VOLUME control
16 PROGRAM FUNCTION button

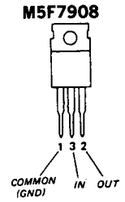
3-1. CIRCU

3-2. SEMIC

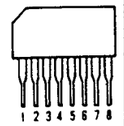
M5F7805
M5F7808
M5F7812



M5F7908



M5218AL
μPC1237HA



witch and

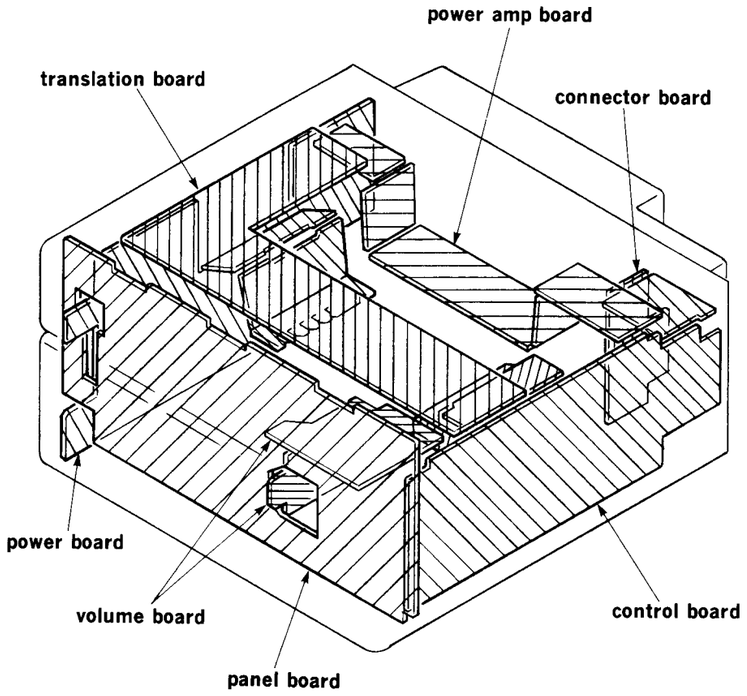
as the AC power
a wall outlet.
e) input jack
EVEL control
nic Bass Feedback)
EP, UK, WG, IT model)
AUS, model)

EQ button
on
L buttons

ON button

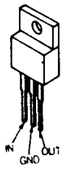
SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION

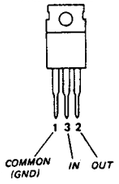


3-2. SEMICONDUCTOR LEAD LAYOUTS

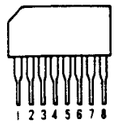
M5F7805
M5F7808
M5F7812



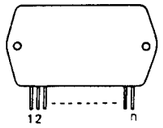
M5F7908



M5218AL
μPC1237HA



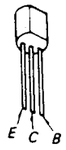
STK4152II



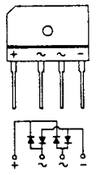
DTA114ES
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SC2603-EF
2SC4113

2SA1175-HFE

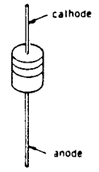
2SB1013-4
2SC1841-PAFAEA
2SD1387



RBV-602-01

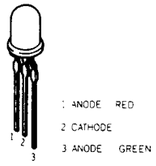


UZL-6L3
UZL-303SC
1SS120
11ES2



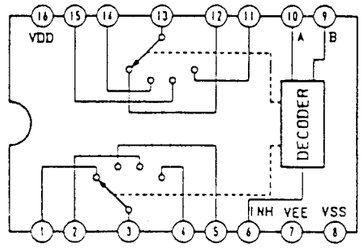
SEL1210W

SPR-54MVW

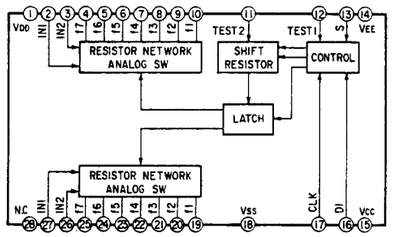


3-3. IC BLOCK DIAGRAMS

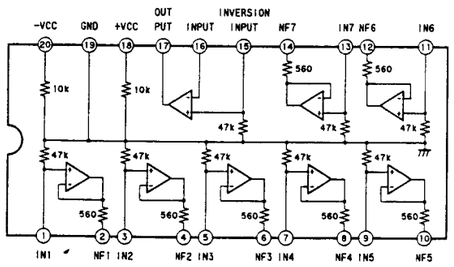
• IC102, 103 TC4052BPHB



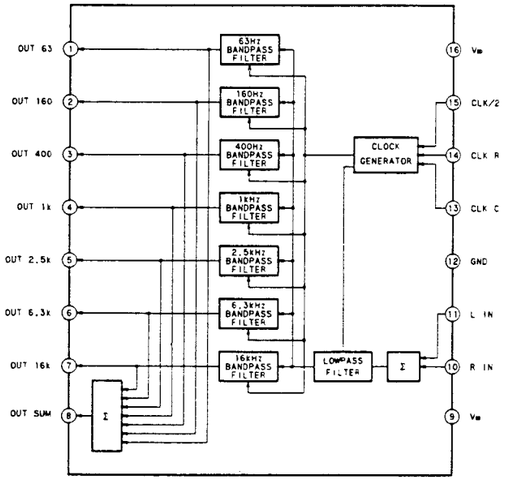
• IC106 LC7522



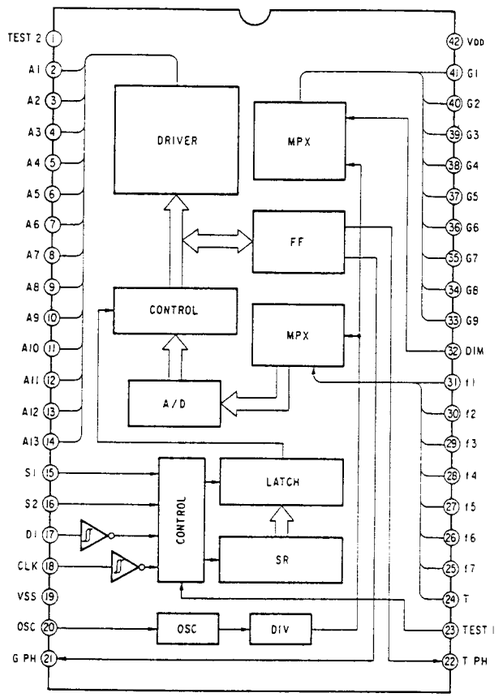
• IC107, 108 M5229P



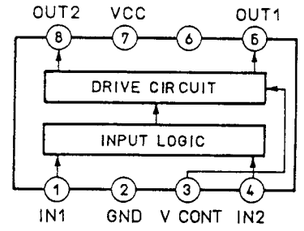
• IC412 XR1091



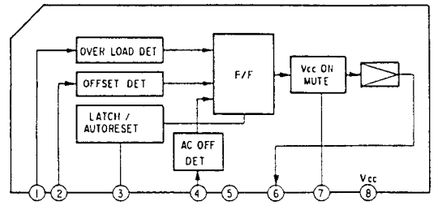
• IC503 LC7565



• IC701 LB1639



• IC802 μPC1237HA



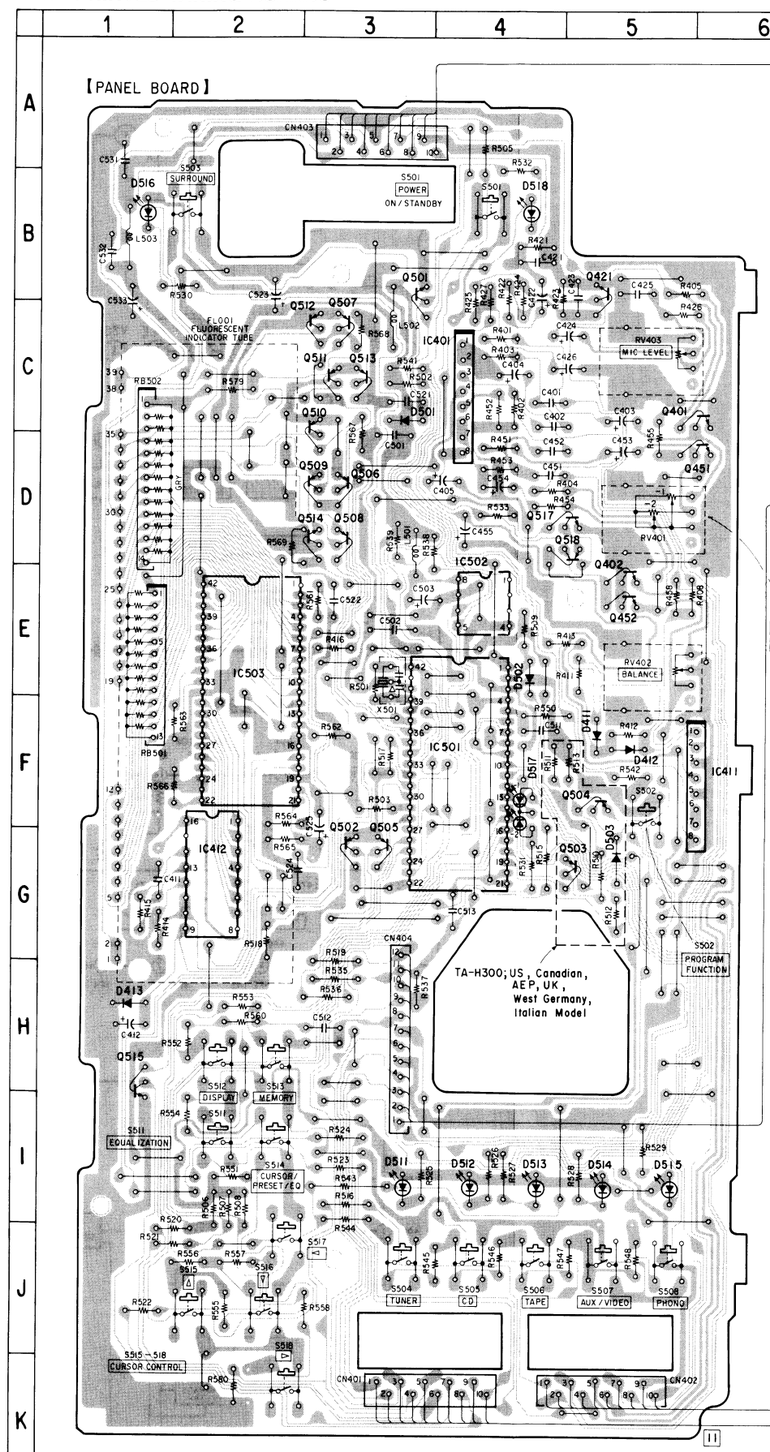
• Semiconductor Location

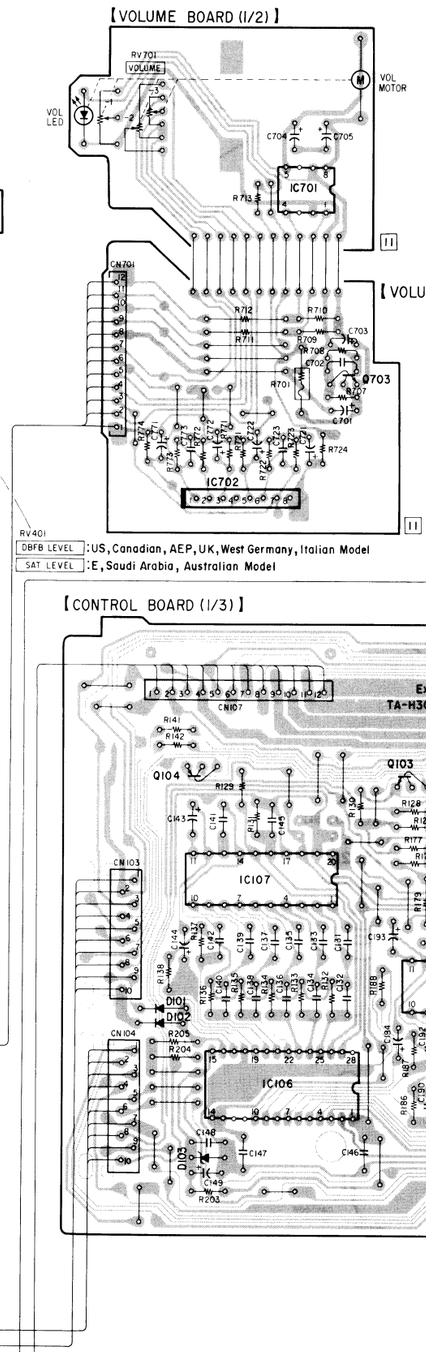
Ref. No.	Location	Ref. No.	Location
D101	H-7	Q102	G-10
D102	H-7	Q103	G-9
D103	J-7	Q104	G-7
D301	H-11	Q152	H-10
D302	H-11	Q401	C-5
D303	H-11	Q402	D-5
D304	H-10	Q421	B-5
D411	F-5	Q451	D-5
D412	F-5	Q452	E-5
D413	H-1	Q501	B-3
D501	C-3	Q502	F-3
D502	E-4	Q503	G-5
D503	G-5	Q504	F-5
D511	I-3	Q505	F-3
D512	I-4	Q506	D-3
D513	I-4	Q507	C-3
D514	I-5	Q508	D-3
D515	I-5	Q509	D-3
D516	B-1	Q510	C-3
D517	F-4	Q511	C-3
D518	B-4	Q512	C-3
D801	E-18	Q513	C-3
D821	D-21	Q514	D-3
D822	D-26	Q511	H-1
D823	C-28	Q517	D-4
D824	D-21	Q518	D-5
D851	E-19	Q703	D-9
D901	G-22	Q801	D-18
D902	G-22	Q802	C-28
D903	D-22	Q803	A-27
D904	B-22	Q804	D-26
D905	B-22	Q851	D-19
D906	B-21	Q901	D-23
D907	A-22	Q902	B-21
D908	B-21	Q903	E-23
D909	C-21	Q904	D-22
IC101	G-14		
IC102	G-12		
IC103	G-12		
IC104	G-11		
IC105	G-9		
IC106	I-8		
IC107	G-8		
IC108	H-10		
IC301	I-11		
IC302	I-11		
IC303	I-11		
IC401	C-4		
IC411	F-6		
IC412	G-2		
IC501	F-4		
IC502	D-4		
IC503	E-2		
IC701	B-8		
IC702	D-8		
IC801	H-19		
IC802	B-27		
IC901	C-22		

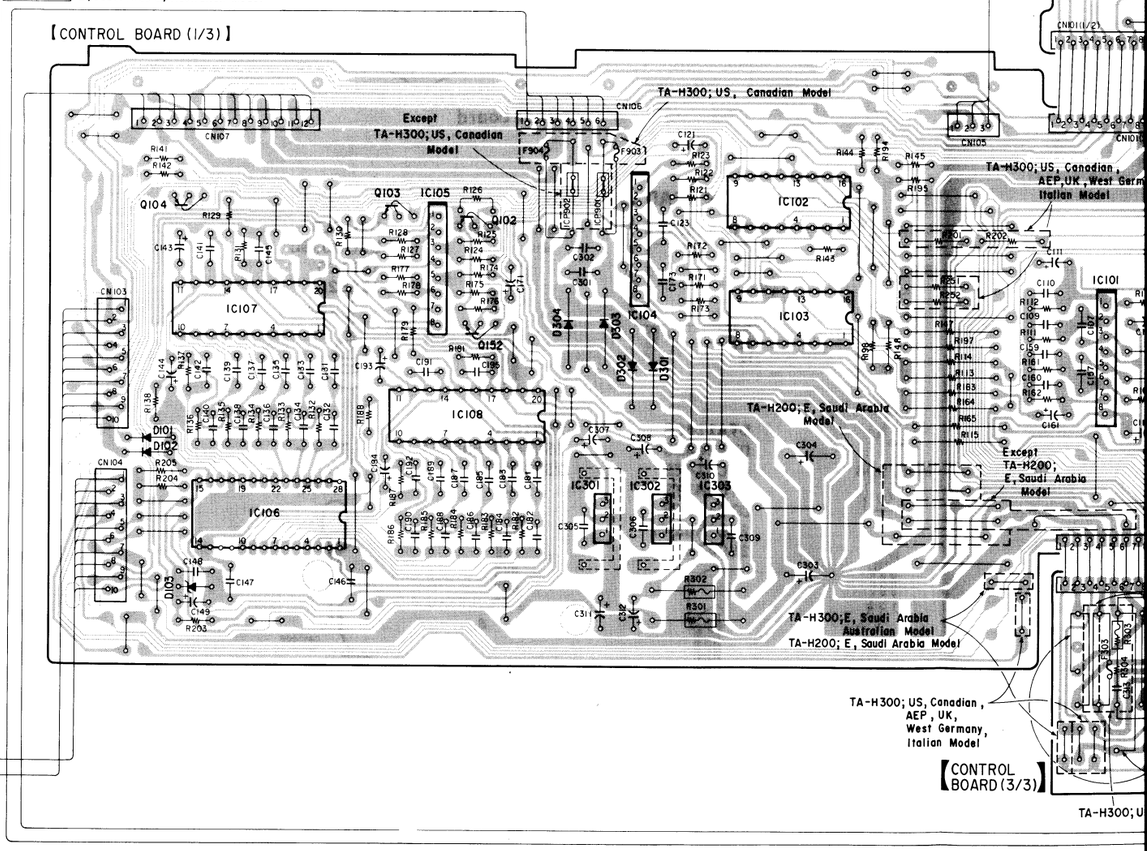
Note:

• ○—— : parts extracted from the component side.

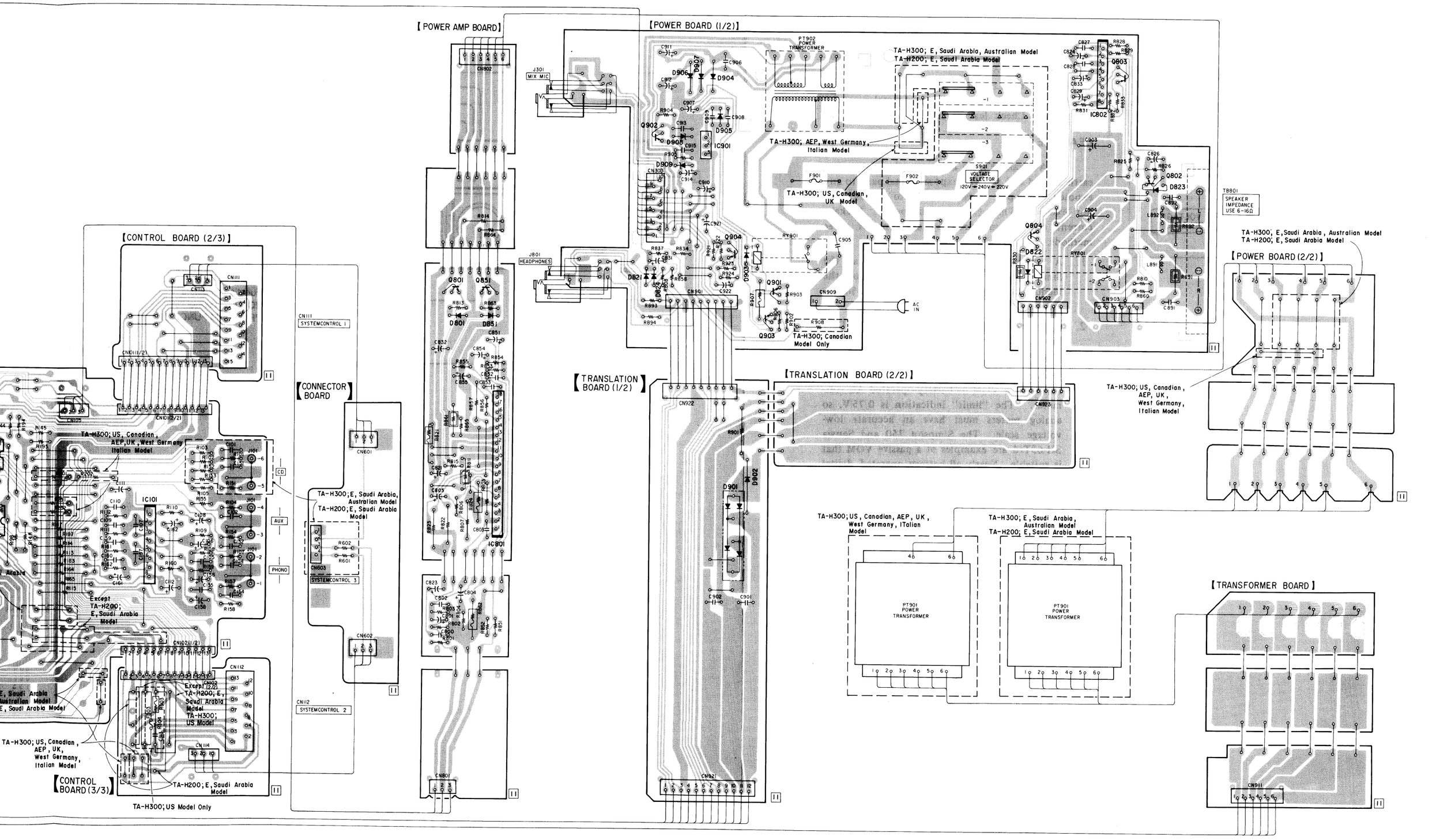
3-4. PRINTED WIRING BOARDS



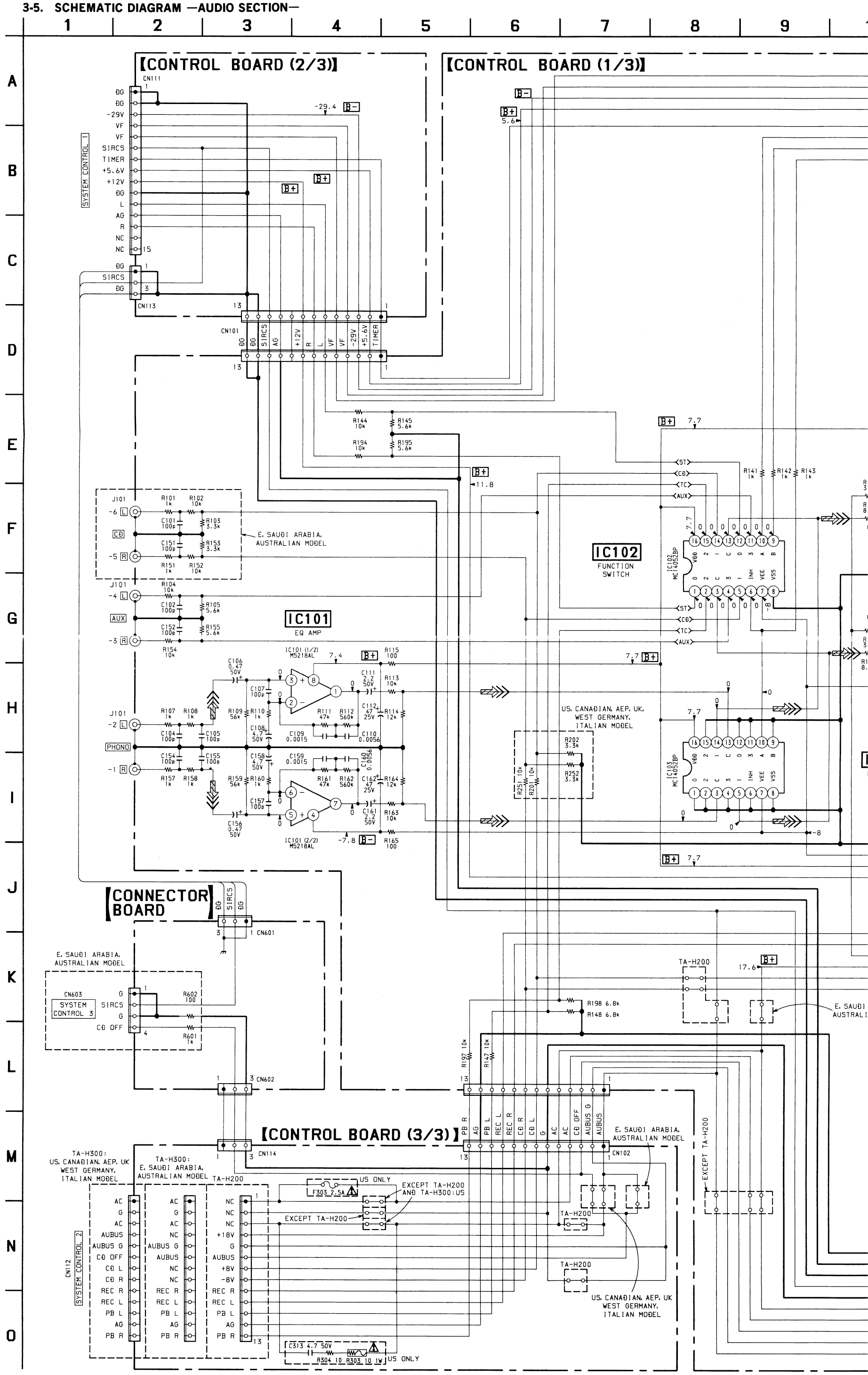

【VOLUME BOARD (1/2)】
【VOLUME BOARD (2/2)】
RV401
DBFB LEVEL :US, Canadian, AEP, UK, West Germany, Italian Model
SAT LEVEL :E, Saudi Arabia, Australian Model


【CONTROL BOARD (1/3)】
TA-H300; US, Canadian Model
Except TA-H300; US, Canadian Model
TA-H300; US, Canadian, AEP, UK, West Germany, Italian Model
TA-H200; E, Saudi Arabia Model
Except TA-H200; E, Saudi Arabia Model
TA-H300; E, Saudi Arabia Australian Model
TA-H200; E, Saudi Arabia Model
TA-H300; US, Canadian, AEP, UK, West Germany, Italian Model
【CONTROL BOARD (3/3)】

13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31



3-5. SCHEMATIC DIAGRAM —AUDIO SECTION—



TROL BOARD (1/3)]

B-
B+ 5.6

IC104
PRE AMP

IC105
LINE AMP

IC102
FUNCTION SWITCH

IC103
FUNCTION SWITCH

IC107
EQUALIZER AMP

IC106
EQUALIZER CONTROL

IC108
EQUALIZER AMP

IC303
REG

IC301
REG

IC302
REG

SURROUND ON:7.6 OFF:0

Q102, 152 SURROUND SWITCH

Q104 2SA1345 SURROUND SWITCHING

Q102 2SC3901

Q152 2SC3901

Q103 2SC3901 SWITCHING

IC104 (1/2) M5218AL

IC104 (2/2) M5218AL

IC105 (1/2) M5218AL

IC105 (2/2) M5218AL

IC107 M5229P

IC108 M5229P

IC106 LC7522

IC102 MC14052BP

IC103 MC14052BP

IC303 M5F7812

IC301 M5F7808

IC302 M5F7908

US, CANADIAN, AEP, UK, WEST GERMANY, ITALIAN MODEL

E, SAUDI ARABIA, AUSTRALIAN MODEL

EXCEPT TA-H200

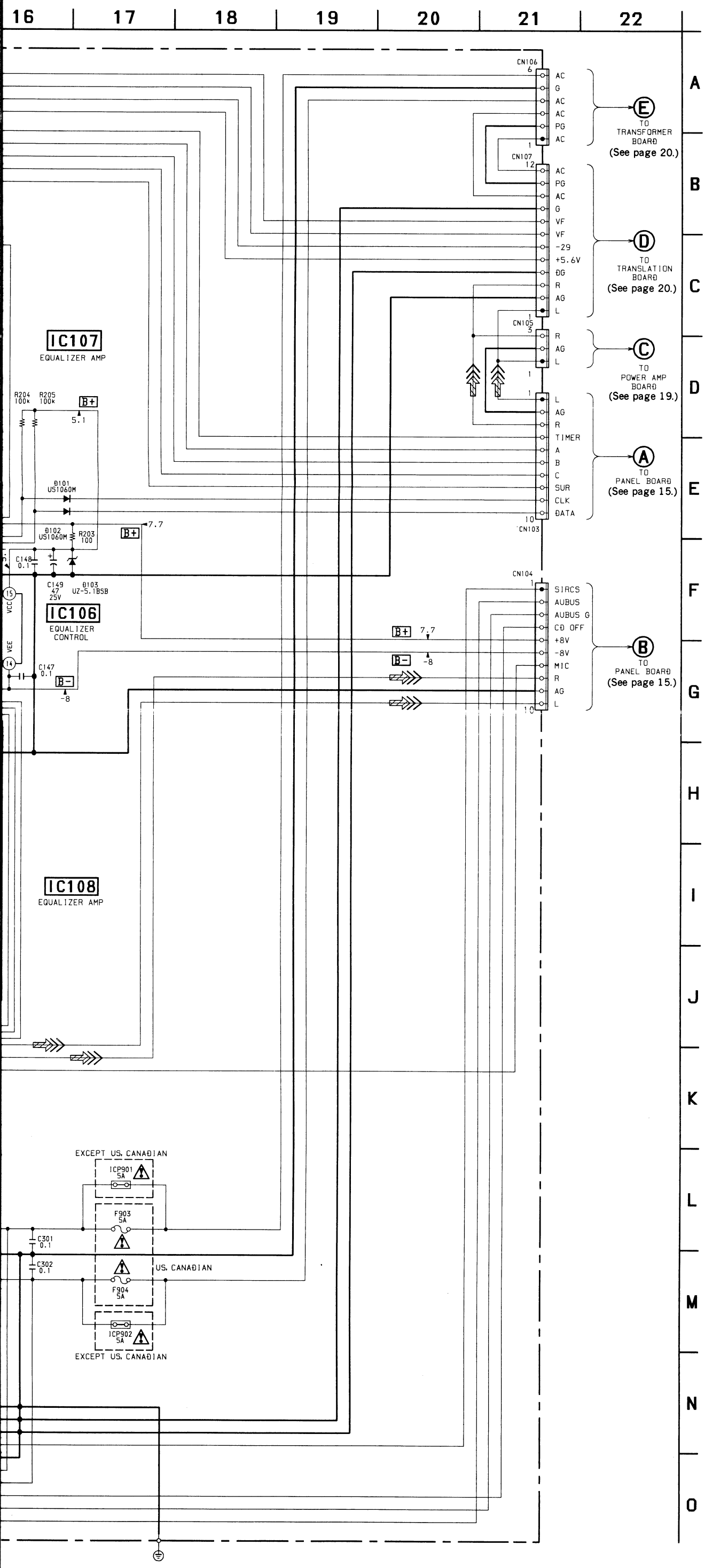
TA-H200

CN102

PB L
REC L
REC R
CD R
CD L
G
AC
AC
CD OFF
AUBUS G
AUBUS

EXCEPT US, CANADIAN

US

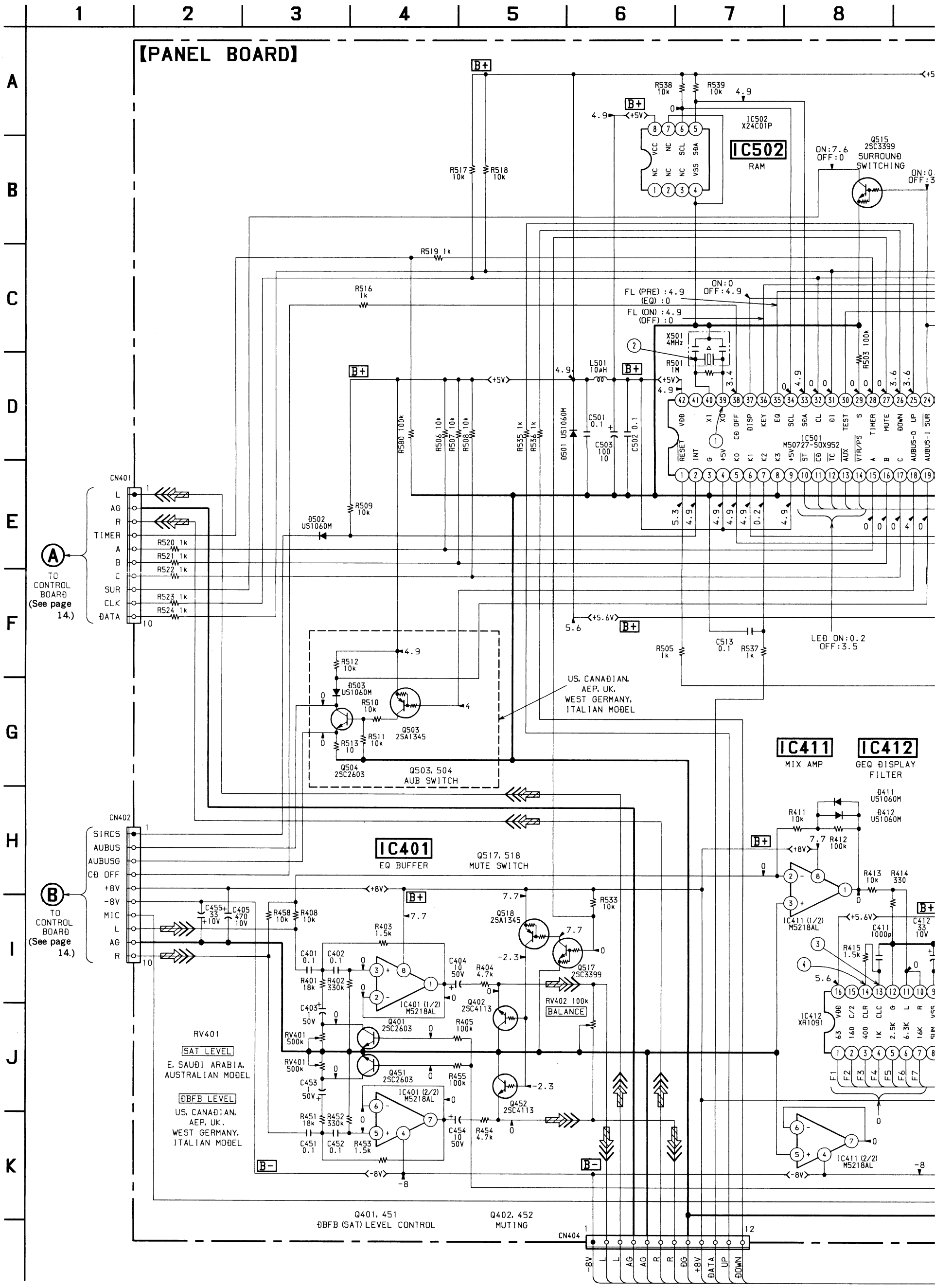


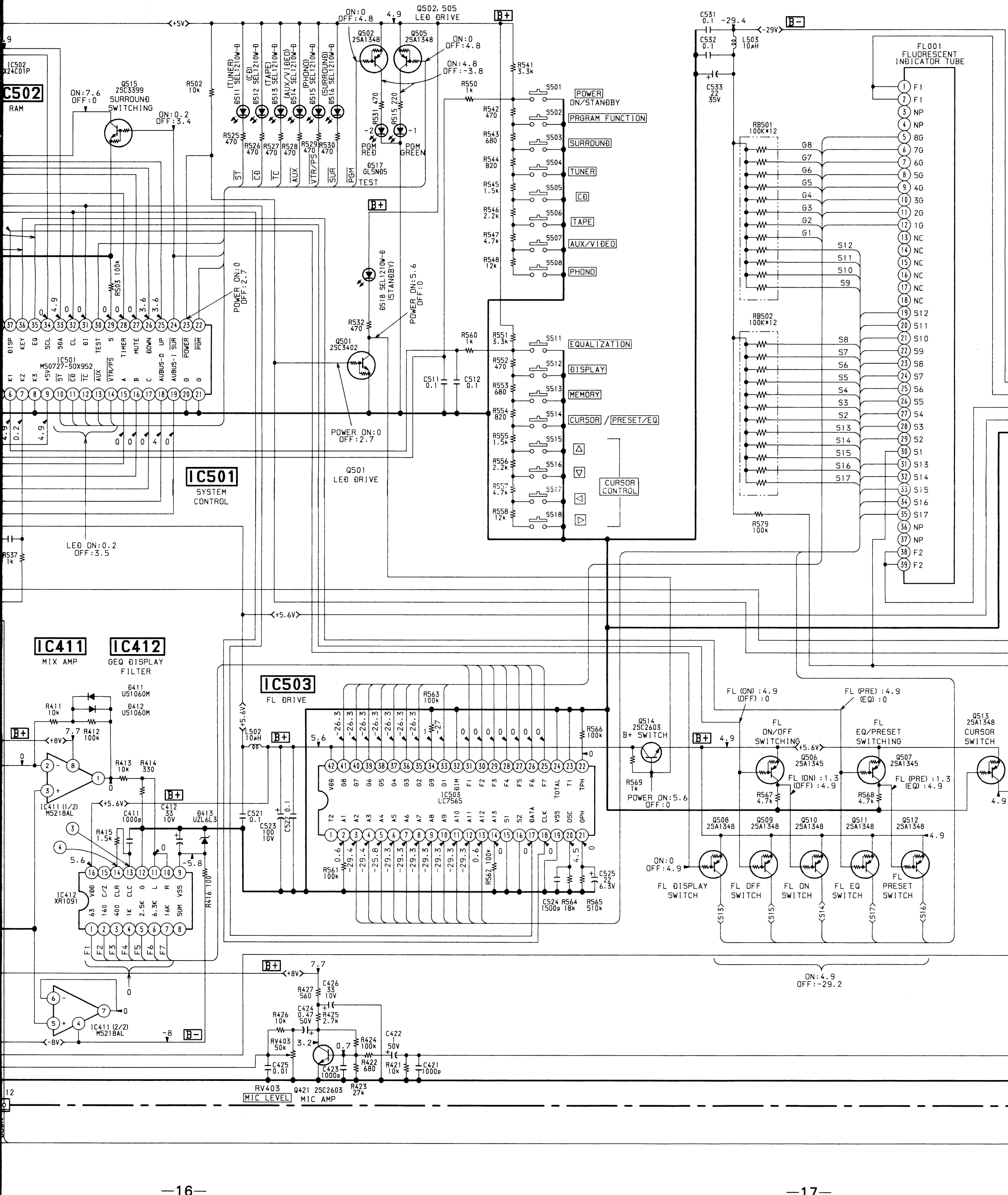
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- B+ : B+ Line
- B− : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  : PHONO

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

3-6. SCHEMATIC DIAGRAM —CONTROL SECTION— • Refer to page 14 for notes.

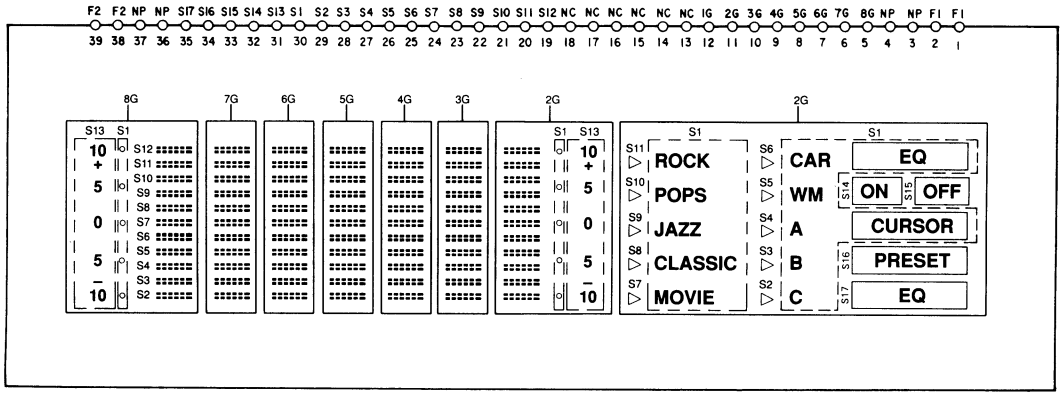



IC501
SYSTEM CONTROL
IC411
MIX AMP
IC412
GEQ DISPLAY FILTER
IC503
FL DRIVE
IC501 M50727-S0X952
IC411 (1/2) M5218AL
IC411 (2/2) M5218AL
IC412 XR1091
IC503 LC7565
Q501 LED DRIVE
Q502, 505 LED DRIVE
Q515 2SC3399 SURROUND SWITCHING
Q501 2SC3402
Q502 2SA1348
Q505 2SA1348
Q514 2SC2603 B+ SWITCH
Q506 2SA1345
Q507 2SA1345
Q513 2SA1348 CURSOR SWITCH
Q508 2SA1348
Q509 2SA1348
Q510 2SA1348
Q511 2SA1348
Q512 2SA1348
Q421 2SC2603 MIC AMP
FL001 FLUORESCENT INDICATOR TUBE
POWER ON/STANDBY
PROGRAM FUNCTION
SURROUND
TUNER
CD
TAPE
AUX/VIDEO
PHONO
EQUALIZATION
DISPLAY
MEMORY
CURSOR / PRESET/EQ
CURSOR CONTROL
MIC LEVEL
FL DISPLAY SWITCH
FL OFF SWITCH
FL ON SWITCH
FL EQ SWITCH
FL PRESET SWITCH
FL ON/OFF SWITCHING
FL EQ/PRESET SWITCHING
B+ SWITCH
LED ON:0.2 OFF:3.5
POWER ON:0 OFF:2.7
POWER ON:5.6 OFF:0
FL (ON) :4.9 (OFF) :0
FL (PRE) :4.9 (EQ) :0
FL (ON) :1.3 (OFF) :4.9
FL (PRE) :1.3 (EQ) :4.9
ON:4.9 OFF:-29.2

FL001
FLUORESCENT INDICATOR TUBE

1 F1
2 F1
3 NP
4 NP
5 8G
6 7G
7 6G
8 5G
9 4G
10 3G
11 2G
12 1G
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 S12
20 S11
21 S10
22 S9
23 S8
24 S7
25 S6
26 S5
27 S4
28 S3
29 S2
30 S1
31 S13
32 S14
33 S15
34 S16
35 S17
36 NP
37 NP
38 F2
39 F2

FL001


F2 F2 NP NP SI7 SI6 SI5 SI4 SI3 SI S2 S3 S4 S5 S6 S7 S8 S9 SI0 SI1 SI2 NC NC NC NC NC NC IG 2G 3G 4G 5G 6G 7G 8G NP NP FI FI
39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
8G 7G 6G 5G 4G 3G 2G 2G
S13 S1 S1 S13 S1 S1 S1
10 + 5 0 5 – 10
S12 S11 S10 S9 S8 S7 S6 S5 S4 S3 S2
S11 S10 S9 S8 S7
ROCK POPS JAZZ CLASSIC MOVIE
S6 S5 S4 S3 S2
CAR WM A B C
EQ ON OFF CURSOR PRESET EQ
S14 S15 S16 S17

B– CN403 1 … 10

-29V
VF
VF
+5.6V
ĐG
RESET
POWER
ĐBFB
AG
MIC

Ⓕ TO POWER BOARĐ (See page 20.)

CN701 1 … 12
-8V L L AG AG R R ĐG +8 ĐATA UP ĐOWN

【VOLUME BOARD】

FL (PRE) :4.9
(EQ) :0

FL EQ/PRESET SWITCHING

Q507 2SA1345
FL (PRE) :1.3
(EQ) :4.9
R568 4.7k
Q511 2SA1348
Q512 2SA1348
4.9
EQ TCH
FL PRESET SWITCH
S17
S16

Q513 2SA1348 CURSOR SWITCH
4.9

R712 1k
R711 1k
B+ 5.5
VOL MOTOR
0.6 0.6
C705 10 50V
C704 10 50V
IC701 LB1639
VCC NC M M
UP GND NC DOWN
3.6 3.6
R701 10 1/4W 7.6
Q703 2SĐ1387-34
R709 10k
R710 10k
5.5
R713 1k
RV701 10k 15C
C701 100 10V
R707 680
R708 2.7k
C702 0.1
6
C703 100 10V
VOL LEĐ
Q703 B+ SWITCH

IC701
VOLUME MOTOR ĐRIVE

RV701 VOLUME

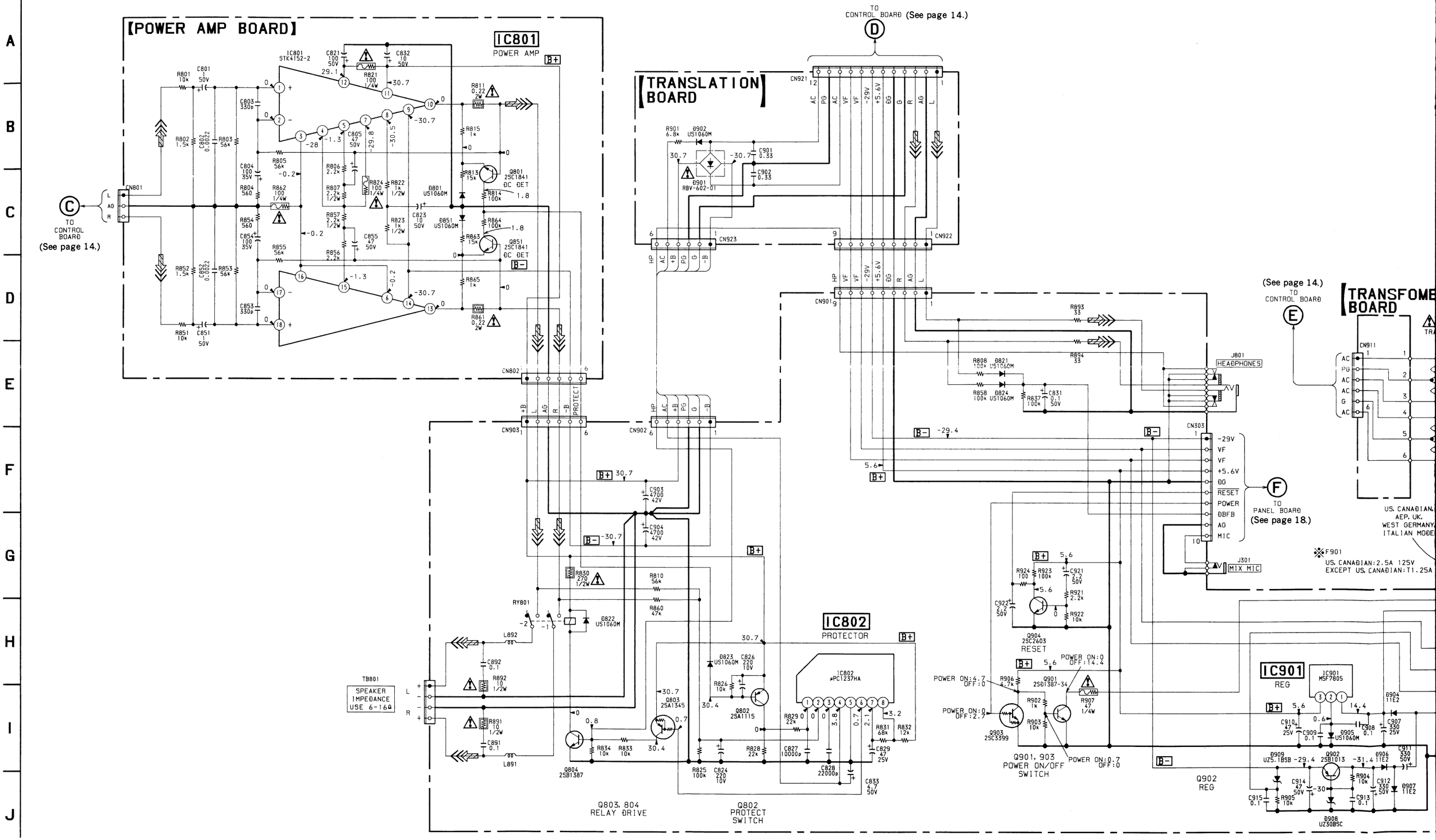
IC702
PRE AMP

R724 100
7.7
B+ 7.4 IC702 (1/2) M5218AL
C721 100 10V
C722 1 50V
RV701-2 100K 15A
C723 0.001
R721 10k
R723 100k
R722 12k
R773 100k
R772 12k
C773 0.001
R771 10k
RV701-3 100K 15A
C771 47 25V
C772 1 50V
-8
R774 100
B– -7.7 IC702 (2/2) M5218AL

• Waveforms

❶ 0.26μSEC 3.8VP-P
❷ 0.26μSEC 3.7VP-P
❸ 2.3μSEC 4VP-P
❹ 2.3μSEC 10.8VP-P

3-7. SCHEMATIC DIAGRAM —POWER SECTION— • Refer to page 14 for notes.



7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22

A B C D E F G H I J

TO CONTROL BOARD (See page 14.)

【TRANSLATION BOARD】

CN921 AC PG AC VF VF -29V +5.6V DG G R AG L

R901 6.8k D902 US1060M C901 0.33 C902 0.33 D901 RBV-602-01 30.7 -30.7

CN923 HP AC +B PG G -B

CN922 HP VF VF -29V +5.6V DG R AG L

CN901

R893 33 R894 33 R808 100k D821 US1060M R858 100k D824 US1060M R837 100k C831 0.1 50V

J801 HEADPHONES

CN902 HP AC +B PG G -B

B- -29.4 B+ 30.7 C903 4700 42V C904 4700 42V B- -30.7

CN303 -29V VF VF +5.6V DG RESET POWER DBFB AG MIC

F TO PANEL BOARD (See page 18.)

J301 MIX MIC

R830 270 1/2W R810 56k R860 47k D822 US1060M

IC802 PROTECTOR

D823 US1060M C826 220 10V R826 10k Q802 2SA1115 Q803 2SA1345

R829 22k R827 10000p R828 22k R825 100k C824 220 10V C828 22000p R831 68k R832 12k C829 47 25V C833 4.7 50V R834 10k R833 10k

Q803, 804 RELAY DRIVE

Q802 PROTECT SWITCH

B+ 5.6 R924 100 R923 100k C921 2.2 50V R921 2.2k C922 2.2 50V R922 10k Q904 2SC2603 RESET

POWER ON:4.7 OFF:0 R906 4.7k Q901 2SD1387-34 POWER ON:0 OFF:14.4 R907 47 1/4W

POWER ON:0 OFF:2.7 R902 1k R903 10k Q903 2SC3399

Q901, 903 POWER ON/OFF SWITCH

POWER ON:0.7 OFF:0

B- -29.4 5.6 B+

Q902 REG

IC901 REG IC901 M5F7805 D904 1IE2 C910 47 25V C909 0.1 D905 US1060M C908 0.1 C907 330 25V C906 0.1 C911 330 50V

D909 UZ5.1BSB -29.4 Q902 2SB1013 -31.4 D906 1IE2 R904 10k C914 47 50V -30 C912 330 50V D907 1IE2 C915 0.1 R905 10k C913 0.1 D908 UZ30BSC

(See page 14.) TO CONTROL BOARD (E)

【TRANSFOMER BOARD】

CN911 AC PG AC AC G AC

PT901 POWER TRANSFORMER

US, CANADIAN, AEP, UK, WEST GERMANY, ITALIAN MODEL

※F901 US, CANADIAN: 2.5A 125V EXCEPT US, CANADIAN: T1.25A

【POWER BOARD】

E, SAUDI ARABIA, AUSTRALIAN MODEL

F901 T1.25A F902 T1.25A S901-3 S901-2 220V 240V 120V S901 VOLTAGE SELECTOR

D903 US1060M RY901 C905 2200pF 400V CN909 AC IN

PT902 POWER TRANSFORMER

S901-1 220V 240V 120V

E, SAUDI ARABIA, AUSTRALIAN MODEL

AEP, WEST GERMANY, ITALIAN MODEL

US, CANADIAN, UK MODEL

R908 3.3M 1/2W CANADIAN MODEL ONLY

SECTION 4
EXPLODED VIEWS

NOTE:

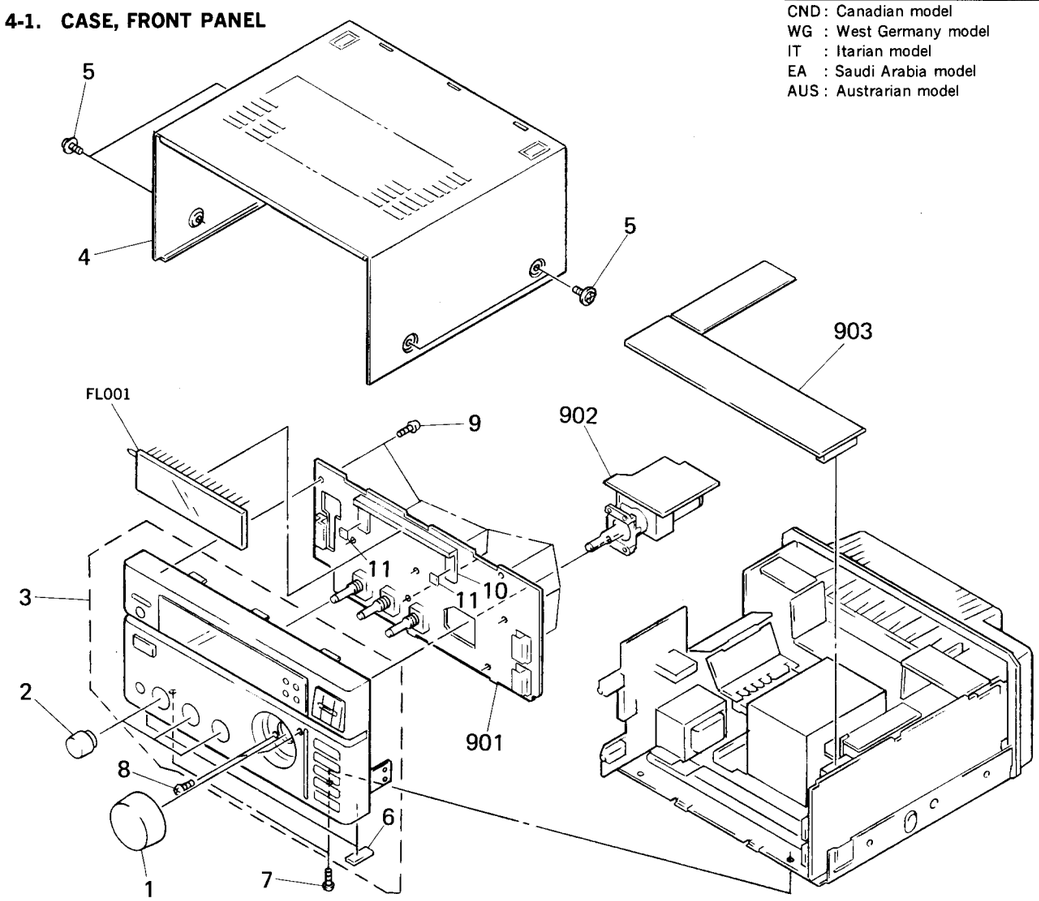
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

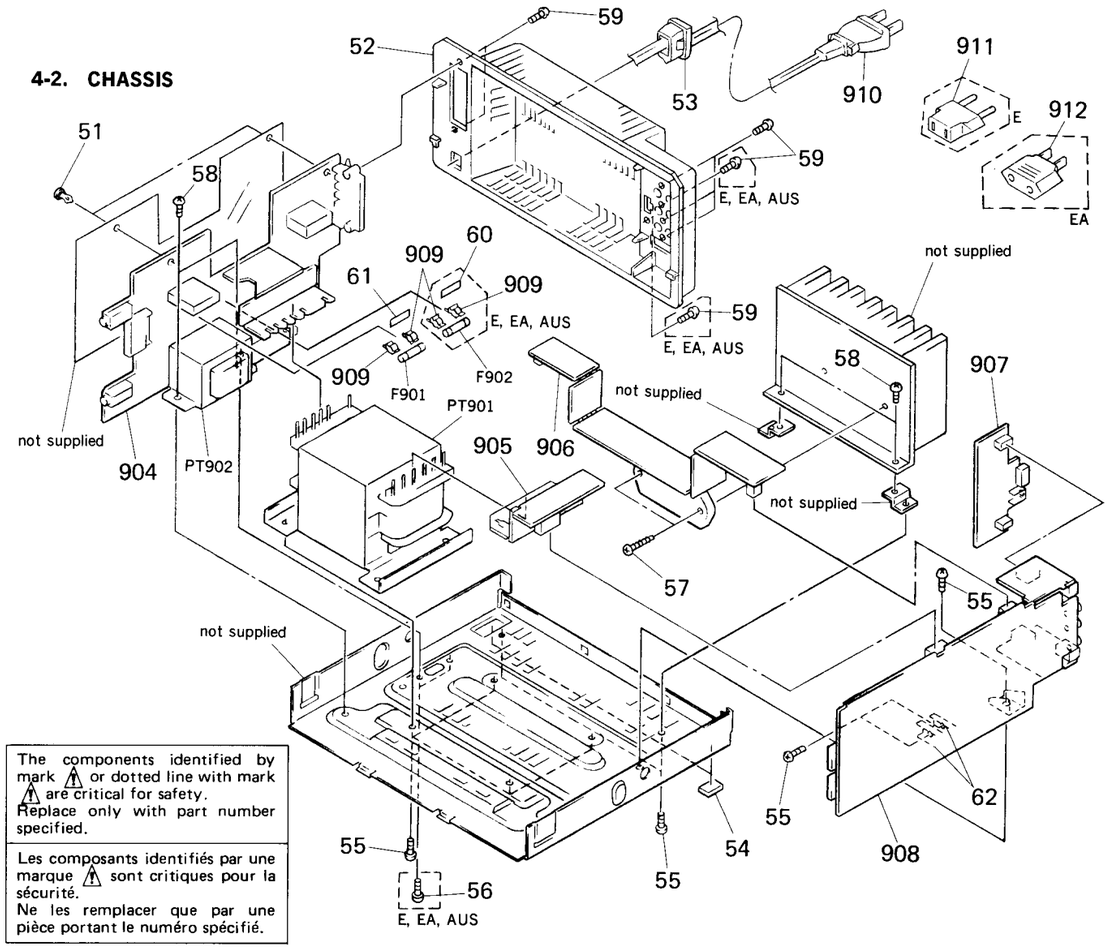
CND : Canadian model
WG : West Germany model
IT : Itarian model
EA : Saudi Arabia model
AUS : Austrarian model

4-1. CASE, FRONT PANEL



No.	Part No.	Description	Remarks
1	X-4936-803-1	KNOB (VOLUME) ASSY	
2	4-930-323-01	KNOB	
3	X-4930-317-1	(H300:US,CND,AEP,WG,UK,IT)...PANEL ASSY, FRONT	
	X-4930-318-2	(H200).....PANEL ASSY, FRONT	
	X-4930-319-2	(H300:AUS,E,EA)...PANEL ASSY, FRONT	
4	4-932-841-01	CASE	
5	3-704-366-01	SCREW (CASE) (M3X8)	
6	4-930-336-01	FOOT (FELT)	
7	7-685-870-01	SCREW +BVTT 3X5 (S)	
8	7-682-548-04	SCREW +BVTT 3X8 (S)	
9	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
10	*4-934-443-01	HOLDER (FL TUBE)	
11	*4-932-810-01	CUSHION (FL)	
901	*A-4334-639-A	(H300:US,CND,AEP,UK,AUS,E,EA)...MOUNTED PCB, PANEL	
	*A-4334-640-A	(H300:WG,IT).....MOUNTED PCB, PANEL	
	*A-4334-995-A	(H200).....MOUNTED PCB, PANEL	
902	*1-635-301-11	PC BOARD, VOLUME	
903	*1-635-304-11	PC BOARD, TRANSLATION	
FL001	1-519-607-11	INDICATOR TUBE, FLUORESCENT	

4-2. CHASSIS



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

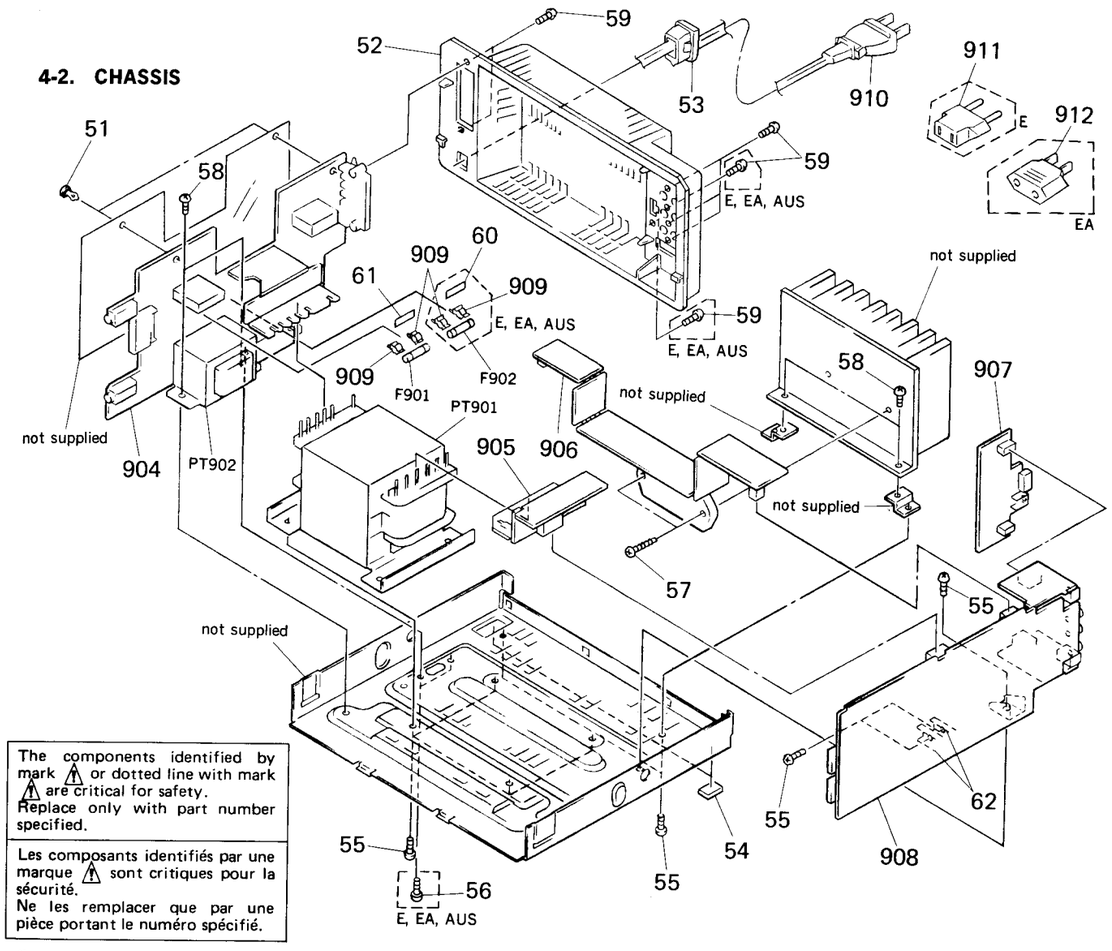
No.	Part No.	Description	Remarks
51	4-812-134-11	RIVET NYLON, 3.5	
52	*4-934-445-02	(AUS,E,EA).....PANEL, BACK	
	*4-934-445-11	(US,CND,AEP,WG,UK,IT)...PANEL, BACK	
53	*3-703-244-00	(EXCEPT E)...BUSHING (2104), CORD	
	*3-703-571-00	(E).....BUSHING (4516), CORD	
54	4-930-336-01	FOOT (FELT)	
55	7-682-547-04	SCREW +BVTT 3X6 (S)	
56	7-685-647-11	(AUS,E,EA)...SCREW +BVTT 3X10 TYPE2 N-S	
57	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
58	7-682-548-04	SCREW +BVTT 3X8 (S)	
59	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
60	3-701-947-12	(EXCEPT US,CND)...LABEL (T1.25A), FUSE	
61	*3-701-946-23	(US,CND).....LABEL (2A125V), FUSE	
	*3-701-947-12	(E, EA, AUS).....LABEL (T1.25A), FUSE	
62	*3-309-144-21	HEAT SINK	
904	*A-4334-641-A	(AUS,E,EA)...MOUNTED PCB, POWER	
	*A-4334-642-A	(AEP).....MOUNTED PCB, POWER	
	*A-4334-643-A	(UK).....MOUNTED PCB, POWER	
	*A-4334-644-A	(WG,IT).....MOUNTED PCB, POWER	
	*A-4334-645-A	(US).....MOUNTED PCB, POWER	
	*A-4334-994-A	(CND).....MOUNTED PCB, POWER	
905	*1-635-303-11	PC BOARD, TRANSFORMER	
906	*A-4334-646-A	(EXCEPT WG,IT)...MOUNTED PCB, POWER AMP	
	*A-4334-647-A	(WG,IT).....MOUNTED PCB, POWER AMP	
907	*1-635-302-11	PC BOARD, CONNECTOR	
908	*A-4334-635-A	(H300:E,EA,AUS)...MOUNTED PCB, CONTROL	
	*A-4334-636-A	(H300:WG,IT).....MOUNTED PCB, CONTROL	
	*A-4334-637-A	(H300:US).....MOUNTED PCB, CONTROL	
	*A-4334-638-A	(H300:CND).....MOUNTED PCB, CONTROL	
	*A-4334-903-A	(H300:AEP,UK).....MOUNTED PCB, CONTROL	
	*A-4334-662-A	(H200).....MOUNTED PCB, CONTROL	
909	1-533-213-31	HOLDER, FUSE	
910	⚠.1-574-804-11	(UK).....CORD, POWER	
	⚠.1-574-805-11	(AEP,WG,IT,EA)...CORD, POWER	
	⚠.1-574-902-11	(E).....CORD, POWER	
	⚠.1-575-105-11	(US,CND).....CORD, POWER	
	⚠.1-575-677-11	(AUS).....CORD, POWER	
911	⚠.1-569-007-11	(E)....ADAPTOR, CONVERSION 2P	
912	⚠.1-569-008-11	(EA)...ADAPTOR, CONVERSION 2P	
F901	⚠.1-532-502-51	(EXCEPT US,CND)...FUSE, TIME LAG (1.25A)	
F901	⚠.1-532-744-11	(US,CND).....FUSE, GLASS TUBE (2.5A)	
F902	⚠.1-532-502-51	(E,EA,AUS).....FUSE, TIME LAG (1.25A)	
PT901	⚠.1-449-998-11	(E,EA,AUS)....TRANSFORMER, POWER	
PT901	⚠.1-449-999-11	(AEP,WG,IT)...TRANSFORMER, POWER	
PT901	⚠.1-450-001-11	(UK).....TRANSFORMER, POWER	
PT901	⚠.1-450-002-11	(US).....TRANSFORMER, POWER	
PT901	⚠.1-450-003-11	(CND).....TRANSFORMER, POWER	
PT902	⚠.1-450-041-11	(E,EA,AUS).....TRANSFORMER, POWER	
PT902	⚠.1-450-042-11	(AEP,UK,WG,IT)...TRANSFORMER, POWER	
PT902	⚠.1-450-043-11	(US,CND).....TRANSFORMER, POWER	

NOTE:

- Due to stand
  list may be
  the diagrams
- Items marke
  are seldom
  delay should
  items.
- If there are
  such as a s
  circuit parts
  resistors in o

Ref.No.	Part No
901	*A-4334-
	*A-4334-
	*A-4334-
902	*1-635-3
903	*1-635-3
904	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
905	*1-635-3
906	*A-4334-
	*A-4334-
907	*1-635-3
908	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
909	1-533-2
910	⚠.1-574-8
	⚠.1-574-8
	⚠.1-574-9
	⚠.1-575-1
	⚠.1-575-6
911	⚠.1-569-0
912	⚠.1-569-0
C101	1-162-2
C102	1-162-2
C104	1-162-2
C105	1-162-2
C106	1-124-9
C107	1-162-2
C108	1-124-9
C109	1-130-4
C110	1-130-4
C111	1-124-9
C112	1-124-4
C121	1-124-4
C123	1-162-2
C131	1-130-4
C132	1-130-4

4-2. CHASSIS



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Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
51	4-812-134-11	RIVET NYLON, 3.5	
52	*4-934-445-02	(AUS,E,EA).....PANEL, BACK	
	*4-934-445-11	(US,CND,AEP,WG,UK,IT)...PANEL, BACK	
53	*3-703-244-00	(EXCEPT E)...BUSHING (2104), CORD	
	*3-703-571-00	(E).....BUSHING (4516), CORD	
54	4-930-336-01	FOOT (FELT)	
55	7-682-547-04	SCREW +BVTT 3X6 (S)	
56	7-685-647-11	(AUS,E,EA)...SCREW +BVTT 3X10 TYPE2 N-S	
57	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
58	7-682-548-04	SCREW +BVTT 3X8 (S)	
59	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
60	3-701-947-12	(EXCEPT US,CND)...LABEL (T1.25A), FUSE	
61	*3-701-946-23	(US,CND).....LABEL (2A125V), FUSE	
	*3-701-947-12	(E, EA, AUS).....LABEL (T1.25A), FUSE	
62	*3-309-144-21	HEAT SINK	
904	*A-4334-641-A	(AUS,E,EA)...MOUNTED PCB, POWER	
	*A-4334-642-A	(AEP).....MOUNTED PCB, POWER	
	*A-4334-643-A	(UK).....MOUNTED PCB, POWER	
	*A-4334-644-A	(WG,IT).....MOUNTED PCB, POWER	
	*A-4334-645-A	(US).....MOUNTED PCB, POWER	
	*A-4334-994-A	(CND).....MOUNTED PCB, POWER	
905	*1-635-303-11	PC BOARD, TRANSFORMER	
906	*A-4334-646-A	(EXCEPT WG,IT)...MOUNTED PCB, POWER AMP	
	*A-4334-647-A	(WG,IT).....MOUNTED PCB, POWER AMP	
907	*1-635-302-11	PC BOARD, CONNECTOR	
908	*A-4334-635-A	(H300:E,EA,AUS)...MOUNTED PCB, CONTROL	
	*A-4334-636-A	(H300:WG,IT).....MOUNTED PCB, CONTROL	
	*A-4334-637-A	(H300:US).....MOUNTED PCB, CONTROL	
	*A-4334-638-A	(H300:CND).....MOUNTED PCB, CONTROL	
	*A-4334-903-A	(H300:AEP,UK).....MOUNTED PCB, CONTROL	
	*A-4334-662-A	(H200).....MOUNTED PCB, CONTROL	
909	1-533-213-31	HOLDER, FUSE	
910	⚠.1-574-804-11	(UK).....CORD, POWER	
	⚠.1-574-805-11	(AEP,WG,IT,EA)...CORD, POWER	
	⚠.1-574-902-11	(E).....CORD, POWER	
	⚠.1-575-105-11	(US,CND).....CORD, POWER	
	⚠.1-575-677-11	(AUS).....CORD, POWER	
911	⚠.1-569-007-11	(E)....ADAPTOR, CONVERSION 2P	
912	⚠.1-569-008-11	(EA)...ADAPTOR, CONVERSION 2P	
F901	⚠.1-532-502-51	(EXCEPT US,CND)...FUSE, TIME LAG (1.25A)	
F901	⚠.1-532-744-11	(US,CND).....FUSE, GLASS TUBE (2.5A)	
F902	⚠.1-532-502-51	(E,EA,AUS).....FUSE, TIME LAG (1.25A)	
PT901	⚠.1-449-998-11	(E,EA,AUS)....TRANSFORMER, POWER	
PT901	⚠.1-449-999-11	(AEP,WG,IT)...TRANSFORMER, POWER	
PT901	⚠.1-450-001-11	(UK).....TRANSFORMER, POWER	
PT901	⚠.1-450-002-11	(US).....TRANSFORMER, POWER	
PT901	⚠.1-450-003-11	(CND).....TRANSFORMER, POWER	
PT902	⚠.1-450-041-11	(E,EA,AUS).....TRANSFORMER, POWER	
PT902	⚠.1-450-042-11	(AEP,UK,WG,IT)...TRANSFORMER, POWER	
PT902	⚠.1-450-043-11	(US,CND).....TRANSFORMER, POWER	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

CND : Canadian model
WG : West Germany model
IT : Itarian model
EA : Saudi Aradia model
AUS : Austrarian model

Ref.No.	Part No.	Description
901	*A-4334-639-A	(H300:US,CND,AEP,UK,AUS,E,EA) ...MOUNTED PCB, PANEL
	*A-4334-640-A	(H300:WG,IT).....MOUNTED PCB, PANEL
	*A-4334-995-A	(H200).....MOUNTED PCB, PANEL
902	*1-635-301-11	PC BOARD, VOLUME
903	*1-635-304-11	PC BOARD, TRANSLATION
904	*A-4334-641-A	(AUS,E,EA)...MOUNTED PCB, POWER
	*A-4334-642-A	(AEP).....MOUNTED PCB, POWER
	*A-4334-643-A	(UK).....MOUNTED PCB, POWER
	*A-4334-644-A	(WG,IT).....MOUNTED PCB, POWER
	*A-4334-645-A	(US).....MOUNTED PCB, POWER
	*A-4334-994-A	(CND).....MOUNTED PCB, POWER
905	*1-635-303-11	PC BOARD, TRANSFORMER
906	*A-4334-646-A	(EXCEPT WG,IT)...MOUNTED PCB, POWER AMP
	*A-4334-647-A	(WG,IT).....MOUNTED PCB, POWER AMP
907	*1-635-302-11	PC BOARD, CONNECTOR
908	*A-4334-635-A	(H300:E,EA,AUS)...MOUNTED PCB, CONTROL
	*A-4334-636-A	(H300:WG,IT).....MOUNTED PCB, CONTROL
	*A-4334-637-A	(H300:US).....MOUNTED PCB, CONTROL
	*A-4334-638-A	(H300:CND).....MOUNTED PCB, CONTROL
	*A-4334-903-A	(H300:AEP,UK).....MOUNTED PCB, CONTROL
	*A-4334-662-A	(H200).....MOUNTED PCB, CONTROL
909	1-533-213-31	HOLDER, FUSE
910	⚠.1-574-804-11	(UK).....CORD, POWER
	⚠.1-574-805-11	(AEP,WG,IT,EA)...CORD, POWER
	⚠.1-574-902-11	(E).....CORD, POWER
	⚠.1-575-105-11	(US,CND).....CORD, POWER
	⚠.1-575-677-11	(AUS).....CORD, POWER
911	⚠.1-569-007-11	(E)....ADAPTOR, CONVERSION 2P
912	⚠.1-569-008-11	(EA)...ADAPTOR, CONVERSION 2P
C101	1-162-282-31	(E,EA,AUS)...CERAMIC 100PF 10% 50V
C102	1-162-282-31	CERAMIC 100PF 10% 50V
C104	1-162-282-31	CERAMIC 100PF 10% 50V
C105	1-162-282-31	CERAMIC 100PF 10% 50V
C106	1-124-902-00	ELECT 0.47MF 20% 50V
C107	1-162-282-31	CERAMIC 100PF 10% 50V
C108	1-124-927-11	ELECT 4.7MF 20% 50V
C109	1-130-473-00	MYLAR 0.0015MF 5% 50V
C110	1-130-480-00	MYLAR 0.0056MF 5% 50V
C111	1-124-925-11	ELECT 2.2MF 20% 50V
C112	1-124-477-11	ELECT 47MF 20% 25V
C121	1-124-477-11	ELECT 47MF 20% 25V
C123	1-162-282-31	CERAMIC 100PF 10% 50V
C131	1-130-474-00	MYLAR 0.0018MF 5% 50V
C132	1-130-474-00	MYLAR 0.0018MF 5% 50V
C133	1-130-479-00	MYLAR 0.0047MF 5% 50V
C134	1-130-479-00	MYLAR 0.0047MF 5% 50V
C135	1-136-154-00	FILM 0.012MF 5% 50V
C136	1-136-154-00	FILM 0.012MF 5% 50V
C137	1-136-158-00	FILM 0.027MF 5% 50V
C138	1-136-158-00	FILM 0.027MF 5% 50V
C139	1-136-163-00	FILM 0.068MF 5% 50V
C140	1-136-163-00	FILM 0.068MF 5% 50V
C141	1-136-168-00	FILM 0.18MF 5% 50V
C142	1-136-168-00	FILM 0.18MF 5% 50V
C143	1-124-902-00	ELECT 0.47MF 20% 50V
C144	1-124-902-00	ELECT 0.47MF 20% 50V
C145	1-130-467-00	MYLAR 470PF 5% 50V
C146	1-164-159-11	CERAMIC 0.1MF 50V
C147	1-164-159-11	CERAMIC 0.1MF 50V
C148	1-164-159-11	CERAMIC 0.1MF 50V
C149	1-124-477-11	ELECT 47MF 20% 25V
C151	1-162-282-31	(E,EA,AUS)...CERAMIC 100PF 10% 50V
C152	1-162-282-31	CERAMIC 100PF 10% 50V
C154	1-162-282-31	CERAMIC 100PF 10% 50V
C155	1-162-282-31	CERAMIC 100PF 10% 50V
C156	1-124-902-00	ELECT 0.47MF 20% 50V
C157	1-162-282-31	CERAMIC 100PF 10% 50V
C158	1-124-927-11	ELECT 4.7MF 20% 50V
C159	1-130-473-00	MYLAR 0.0015MF 5% 50V
C160	1-130-480-00	MYLAR 0.0056MF 5% 50V
C161	1-124-925-11	ELECT 2.2MF 20% 50V
C162	1-124-477-11	ELECT 47MF 20% 25V
C171	1-124-477-11	ELECT 47MF 20% 25V
C173	1-162-282-31	CERAMIC 100PF 10% 50V
C181	1-130-474-00	MYLAR 0.0018MF 5% 50V
C182	1-130-474-00	MYLAR 0.0018MF 5% 50V
C183	1-130-479-00	MYLAR 0.0047MF 5% 50V
C184	1-130-479-00	MYLAR 0.0047MF 5% 50V
C185	1-136-154-00	FILM 0.012MF 5% 50V
C186	1-136-154-00	FILM 0.012MF 5% 50V
C187	1-136-158-00	FILM 0.027MF 5% 50V
C188	1-136-158-00	FILM 0.027MF 5% 50V
C189	1-136-163-00	FILM 0.068MF 5% 50V
C190	1-136-163-00	FILM 0.068MF 5% 50V
C191	1-136-168-00	FILM 0.18MF 5% 50V
C192	1-136-168-00	FILM 0.18MF 5% 50V
C193	1-124-902-00	ELECT 0.47MF 20% 50V
C194	1-124-902-00	ELECT 0.47MF 20% 50V
C195	1-130-467-00	MYLAR 470PF 5% 50V

Ref.No.	Part No.	Description			
C301	1-136-165-00	FILM	0.1MF	5%	50V
C302	1-136-165-00	FILM	0.1MF	5%	50V
C303	1-124-563-11	ELECT	2200MF	20%	25V
C304	1-124-563-11	ELECT	2200MF	20%	25V
C305	1-164-159-11	CERAMIC	0.1MF		50V
C306	1-164-159-11	CERAMIC	0.1MF		50V
C307	1-124-477-11	ELECT	47MF	20%	25V
C308	1-124-477-11	ELECT	47MF	20%	25V
C309	1-164-159-11	CERAMIC	0.1MF		50V
C310	1-124-477-11	ELECT	47MF	20%	25V
C311	1-124-477-11	ELECT	47MF	20%	25V
C312	1-124-477-11	ELECT	47MF	20%	25V
C313	1-124-768-11	(US)...ELECT	4.7MF	20%	50V
C401	1-136-165-00	FILM	0.1MF	5%	50V
C402	1-136-165-00	FILM	0.1MF	5%	50V
C403	1-126-160-11	ELECT	1MF	20%	50V
C404	1-124-261-00	ELECT	10MF	20%	50V
C405	1-124-472-11	ELECT	470MF	20%	10V
C411	1-162-294-31	CERAMIC	0.001MF	10%	50V
C412	1-124-229-00	ELECT	33MF	20%	10V
C421	1-162-294-31	CERAMIC	0.001MF	10%	50V
C422	1-126-160-11	ELECT	1MF	20%	50V
C423	1-162-294-31	CERAMIC	0.001MF	10%	50V
C424	1-124-465-00	ELECT	0.47MF	20%	50V
C425	1-161-379-00	CERAMIC	0.01MF	30%	16V
C426	1-124-229-00	ELECT	33MF	20%	10V
C451	1-136-165-00	FILM	0.1MF	5%	50V
C452	1-136-165-00	FILM	0.1MF	5%	50V
C453	1-126-160-11	ELECT	1MF	20%	50V
C454	1-124-261-00	ELECT	10MF	20%	50V
C455	1-124-229-00	ELECT	33MF	20%	10V
C501	1-164-159-11	CERAMIC	0.1MF		50V
C502	1-164-159-11	CERAMIC	0.1MF		50V
C503	1-124-584-00	ELECT	100MF	20%	10V
C511	1-164-159-11	CERAMIC	0.1MF		50V
C512	1-164-159-11	CERAMIC	0.1MF		50V
C513	1-164-159-11	CERAMIC	0.1MF		50V
C521	1-164-159-11	CERAMIC	0.1MF		50V
C522	1-164-159-11	CERAMIC	0.1MF		50V
C523	1-124-584-00	ELECT	100MF	20%	10V
C524	1-161-374-11	CERAMIC	0.0015MF	30%	16V
C525	1-126-153-11	ELECT	22MF	20%	6.3V
C531	1-164-159-11	CERAMIC	0.1MF		50V
C532	1-164-159-11	CERAMIC	0.1MF		50V
C533	1-124-248-00	ELECT	22MF	20%	35V
C701	1-124-443-00	ELECT	100MF	20%	10V
C702	1-164-159-11	CERAMIC	0.1MF		50V
C703	1-124-443-00	ELECT	100MF	20%	10V
C704	1-123-875-11	ELECT	10MF	20%	50V
C705	1-123-875-11	ELECT	10MF	20%	50V
C721	1-124-443-00	ELECT	100MF	20%	10V
C722	1-124-791-11	ELECT	1MF	20%	50V
C723	1-130-471-00	MYLAR	0.001MF	5%	50V
C771	1-124-477-11	ELECT	47MF	20%	25V
C772	1-124-791-11	ELECT	1MF	20%	50V
C773	1-130-471-00	MYLAR	0.001MF	5%	50V
C801	1-124-791-11	ELECT	1MF	20%	50V

Ref.No.	Part No.	Description			
C802	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C803	1-162-288-31	CERAMIC	330PF	10%	50V
C804	1-124-122-11	ELECT	100MF	20%	35V
C805	1-124-910-11	ELECT	47MF	20%	50V
C821	1-124-122-11	ELECT	100MF	20%	50V
C823	1-123-875-11	ELECT	10MF	20%	50V
C824	1-126-176-11	ELECT	220MF	20%	10V
C826	1-126-176-11	ELECT	220MF	20%	10V
C827	1-161-379-00	CERAMIC	0.01MF	30%	16V
C828	1-161-494-00	CERAMIC	0.022MF		25V
C829	1-124-477-11	ELECT	47MF	20%	25V
C831	1-124-463-00	ELECT	0.1MF	20%	50V
C832	1-123-875-11	ELECT	10MF	20%	50V
C833	1-124-927-11	ELECT	4.7MF	20%	50V
C851	1-124-791-11	ELECT	1MF	20%	50V
C852	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C853	1-162-288-31	CERAMIC	330PF	10%	50V
C854	1-124-122-11	ELECT	100MF	20%	35V
C855	1-124-910-11	ELECT	47MF	20%	50V
C891	1-136-165-00	FILM	0.1MF	5%	50V
C892	1-136-165-00	FILM	0.1MF	5%	50V
C901	1-136-171-00	FILM	0.33MF	5%	50V
C902	1-136-171-00	FILM	0.33MF	5%	50V
C903	1-126-224-11	ELECT	4700MF	20%	42V
C904	1-126-224-11	ELECT	4700MF	20%	42V
C905 ⚠	1-161-742-00	CERAMIC	0.0022MF	20%	400V
C906	1-136-165-00	FILM	0.1MF	5%	50V
C907	1-124-479-11	ELECT	330MF	20%	25V
C908	1-164-159-11	CERAMIC	0.1MF		50V
C909	1-164-159-11	CERAMIC	0.1MF		50V
C910	1-124-477-11	ELECT	47MF	20%	25V
C911	1-124-912-11	ELECT	330MF	20%	50V
C912	1-124-912-11	ELECT	330MF	20%	50V
C913	1-164-159-11	CERAMIC	0.1MF		50V
C914	1-124-910-11	ELECT	47MF	20%	50V
C915	1-164-159-11	CERAMIC	0.1MF		50V
C921	1-124-925-11	ELECT	2.2MF	20%	50V
C922	1-124-925-11	ELECT	2.2MF	20%	50V

CN101	1-506-979-31	CONNECTOR, BOARD TO BOARD 13P
CN102	1-506-979-31	CONNECTOR, BOARD TO BOARD 13P
CN103	1-568-321-11	SOCKET, CONNECTOR 10P
CN104	1-568-321-11	SOCKET, CONNECTOR 10P
CN105	*1-569-499-11	PIN, CONNECTOR 3P
CN106	*1-569-501-11	PIN, CONNECTOR 6P
CN107	*1-569-507-11	PIN, CONNECTOR 12P
CN111	*1-566-859-11	SOCKET, CONNECTOR 15P(SYSTEM CONTROL 1)
CN112	*1-565-291-11	SOCKET, CONNECTOR 13P(SYSTEM CONTROL 2)
CN303	1-568-321-11	SOCKET, CONNECTOR 10P
CN401	*1-568-322-11	PLUG, CONNECTOR 10P
CN402	*1-568-322-11	PLUG, CONNECTOR 10P
CN403	*1-568-322-11	PLUG, CONNECTOR 10P
CN404	*1-561-652-00	SOCKET, CONNECTOR 12P
CN601	1-569-490-11	SOCKET, CONNECTOR 3P
CN602	1-569-490-11	SOCKET, CONNECTOR 3P
CN603	1-564-980-11	(E,EA,AUS)...PIN CONNECTOR 4P (SYSTEM CONTROL 3)
CN701	*1-560-443-11	PIN, CONNECTOR 12P

Note:
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Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
CN801	1-569-490-11	SOCKET, CONNECTOR 3P
CN802	1-569-492-11	SOCKET, CONNECTOR 6P
CN901	*1-569-504-11	PIN, CONNECTOR 9P
CN902	*1-569-501-11	PIN, CONNECTOR 6P
CN903	*1-569-501-11	PIN, CONNECTOR 6P
CN909	*1-564-321-00	PIN, CONNECTOR 2P
CN911	1-569-492-11	SOCKET, CONNECTOR 6P
CN921	*1-569-498-11	SOCKET, CONNECTOR 12P
CN922	*1-569-495-11	SOCKET, CONNECTOR 9P
CN923	1-569-492-11	SOCKET, CONNECTOR 6P
D101	8-719-912-20	DIODE 1SS120
D102	8-719-912-20	DIODE 1SS120
D103	8-719-010-38	DIODE UZ-5.1BSB
D301	8-719-200-82	DIODE 11ES2
D302	8-719-200-82	DIODE 11ES2
D303	8-719-200-82	DIODE 11ES2
D304	8-719-200-82	DIODE 11ES2
D411	8-719-912-20	DIODE 1SS120
D412	8-719-912-20	DIODE 1SS120
D413	8-719-000-54	DIODE UZL-6L3
D501	8-719-912-20	DIODE 1SS120
D502	8-719-912-20	DIODE 1SS120
D503	8-719-912-20	(US,CND,AEP,UK,WG,IT)...DIODE 1SS120
D511	8-719-303-13	DIODE SEL1210W
D512	8-719-303-13	DIODE SEL1210W
D513	8-719-303-13	DIODE SEL1210W
D514	8-719-303-13	DIODE SEL1210W
D515	8-719-303-13	DIODE SEL1210W
D516	8-719-303-13	DIODE SEL1210W
D517	8-719-920-55	DIODE SPR-54MVW
D518	8-719-303-13	DIODE SEL1210W
D801	8-719-912-20	DIODE 1SS120
D821	8-719-912-20	DIODE 1SS120
D822	8-719-912-20	DIODE 1SS120
D823	8-719-912-20	DIODE 1SS120
D824	8-719-912-20	DIODE 1SS120
D851	8-719-912-20	DIODE 1SS120
D901	8-719-302-38	DIODE RBV-602-01
D902	8-719-912-20	DIODE 1SS120
D903	8-719-912-20	DIODE 1SS120
D904	8-719-200-82	DIODE 11ES2
D905	8-719-912-20	DIODE 1SS120
D906	8-719-200-82	DIODE 11ES2
D907	8-719-200-82	DIODE 11ES2
D908	8-719-011-13	DIODE UZ-30BSC
D909	8-719-010-38	DIODE UZ-5.1BSB
F303 ⚠	1-532-780-21	(US)...FUSE, MICRO (SECONDARY)(2.5A)
F901 ⚠	1-532-502-51	(EXCEPT US,CND)...FUSE, TIME LAG(1.25A)
F901 ⚠	1-532-744-11	(US,CND).....FUSE, GLASS TUBE (2.5A)
F902 ⚠	1-532-502-51	(E,EA,AUS)...FUSE, TIME LAG (1.25A)
F903	1-532-783-21	(US,CND)...FUSE, MICRO (SECONDARY)(5A)
F904	1-532-783-21	(US,CND)...FUSE, MICRO (SECONDARY)(5A)
FL001	1-519-607-11	INDICATOR TUBE, FLUORESCENT
IC101	8-759-634-50	IC M5218AL
IC102	8-759-208-08	IC TC4052BPHB
IC103	8-759-208-08	IC TC4052BPHB
IC104	8-759-634-50	IC M5218AL
IC105	8-759-634-50	IC M5218AL
IC106	8-759-804-49	IC LC7522
IC107	8-759-603-14	IC M5229P
IC108	8-759-603-14	IC M5229P
IC301	8-759-604-30	IC M5F7808
IC302	8-759-604-48	IC M5F7908
IC303	8-759-604-33	IC M5F7812
IC401	8-759-634-50	IC M5218AL
IC411	8-759-634-50	IC M5218AL
IC412	8-759-991-11	IC XR1091
IC501	8-759-634-76	IC M50727-183SP
IC502	8-759-500-31	IC X24C01P
IC503	8-759-820-59	IC LC7565
IC701	8-759-820-62	IC LB1639
IC702	8-759-634-50	IC M5218AL
IC801	8-749-941-52	IC STK4152II
IC802	8-759-111-68	IC UPC1237HA
IC901	8-759-604-29	IC M5F7805L
⚠ICP901	1-532-846-21	(EXCEPT US,CND)...LINK, IC 5A
⚠ICP902	1-532-846-21	(EXCEPT US,CND)...LINK, IC 5A
J101	1-565-258-11	(US,CND,AEP,UK,WG,IT)...JACK, PIN 4P (AUX/PHONO)
J101	1-565-320-11	(E,EA,AUS)...JACK, PIN 6P(AUX/CD/PHONO)
J301	1-562-837-21	JACK (MIX MIC)
J801	1-562-837-21	JACK (HEADPHONES)
L501	1-410-509-11	INDUCTOR 10UH
L502	1-410-509-11	INDUCTOR 10UH
L503	1-410-509-11	INDUCTOR 10UH
L891	*1-420-872-00	COIL, AIR CORE
L892	*1-420-872-00	COIL, AIR CORE
PT901⚠	1-449-998-11	(E,EA,AUS)....TRANSFORMER, POWER
PT901⚠	1-449-999-11	(AEP,WG,IT)...TRANSFORMER, POWER
PT901⚠	1-450-001-11	(UK).....TRANSFORMER, POWER
PT901⚠	1-450-002-11	(US).....TRANSFORMER, POWER
PT901⚠	1-450-003-11	(CND).....TRANSFORMER, POWER
PT902⚠	1-450-041-11	(E,EA,AUS).....TRANSFORMER, POWER
PT902⚠	1-450-042-11	(AEP,UK,WG,IT)...TRANSFORMER, POWER
PT902⚠	1-450-043-11	(US,CND).....TRANSFORMER, POWER
Q102	8-729-900-74	TRANSISTOR DTC143TS
Q103	8-729-900-74	TRANSISTOR DTC143TS
Q104	8-729-900-65	TRANSISTOR DTA144ES
Q152	8-729-900-74	TRANSISTOR DTC143TS
Q401	8-729-620-05	TRANSISTOR 2SC2603-EF
Q402	8-729-809-07	TRANSISTOR 2SC4113
Q421	8-729-620-05	TRANSISTOR 2SC2603-EF
Q451	8-729-620-05	TRANSISTOR 2SC2603-EF
Q452	8-729-809-07	TRANSISTOR 2SC4113
Q501	8-729-900-80	TRANSISTOR DTC114ES
Q502	8-729-900-61	TRANSISTOR DTA114ES
Q503	8-729-900-65	(US,CND,AEP,UK,WG,IT) ...TRANSISTOR DTA144ES
Q504	8-729-620-05	(US,CND,AEP,UK,WG,IT) ...TRANSISTOR 2SC2603-EF
Q505	8-729-900-61	TRANSISTOR DTA114ES
Q506	8-729-900-61	TRANSISTOR DTA114ES
Q507	8-729-900-65	TRANSISTOR DTA144ES

Note:
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Ref.No.	Part No.	Description
Q508	8-729-900-65	TRANSISTOR DTA144ES
Q509	8-729-900-61	TRANSISTOR DTA114ES
Q510	8-729-900-61	TRANSISTOR DTA114ES
Q511	8-729-900-61	TRANSISTOR DTA114ES
Q512	8-729-900-61	TRANSISTOR DTA114ES
Q513	8-729-900-61	TRANSISTOR DTA114ES
Q514	8-729-620-05	TRANSISTOR 2SC2603-EF
Q515	8-729-900-89	TRANSISTOR DTC144ES
Q517	8-729-900-89	TRANSISTOR DTC144ES
Q518	8-729-900-65	TRANSISTOR DTA144ES
Q703	8-729-801-93	TRANSISTOR 2SD1387-3
Q801	8-729-140-84	TRANSISTOR 2SA1841-PAFAEA
Q802	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q803	8-729-900-65	TRANSISTOR DTA144ES
Q804	8-729-801-93	TRANSISTOR 2SD1387-3
Q851	8-729-140-84	TRANSISTOR 2SA1841-PAFAEA
Q901	8-729-801-93	TRANSISTOR 2SD1387-3
Q902	8-729-801-84	TRANSISTOR 2SB1013-4
Q903	8-729-900-89	TRANSISTOR DTC144ES
Q904	8-729-620-05	TRANSISTOR 2SC2603-EF
R101	1-249-417-11	(E,EA,AUS)...CARBON 1K 5% 1/4W
R102	1-249-429-11	(E,EA,AUS)...CARBON 10K 5% 1/4W
R103	1-249-423-11	(E,EA,AUS)...CARBON 3.3K 5% 1/4W
R104	1-249-429-11	CARBON 10K 5% 1/4W
R105	1-249-426-11	CARBON 5.6K 5% 1/4W
R107	1-249-417-11	CARBON 1K 5% 1/4W
R108	1-249-417-11	CARBON 1K 5% 1/4W
R109	1-249-438-11	CARBON 56K 5% 1/4W
R110	1-249-417-11	CARBON 1K 5% 1/4W
R111	1-249-437-11	CARBON 47K 5% 1/4W
R112	1-247-897-11	CARBON 560K 5% 1/4W
R113	1-249-429-11	CARBON 10K 5% 1/4W
R114	1-249-430-11	CARBON 12K 5% 1/4W
R115	1-249-405-11	CARBON 100 5% 1/4W
R121	1-249-428-11	CARBON 8.2K 5% 1/4W
R122	1-249-423-11	CARBON 3.3K 5% 1/4W
R123	1-249-435-11	CARBON 33K 5% 1/4W
R124	1-249-438-11	CARBON 56K 5% 1/4W
R125	1-249-435-11	CARBON 33K 5% 1/4W
R126	1-249-441-11	CARBON 100K 5% 1/4W
R127	1-249-435-11	CARBON 33K 5% 1/4W
R128	1-249-438-11	CARBON 56K 5% 1/4W
R129	1-249-427-11	CARBON 6.8K 5% 1/4W
R130	1-249-439-11	CARBON 68K 5% 1/4W
R131	1-249-427-11	CARBON 6.8K 5% 1/4W
R132	1-247-903-00	CARBON 1M 5% 1/4W
R133	1-247-903-00	CARBON 1M 5% 1/4W
R134	1-247-903-00	CARBON 1M 5% 1/4W
R135	1-247-903-00	CARBON 1M 5% 1/4W
R136	1-247-903-00	CARBON 1M 5% 1/4W
R137	1-247-903-00	CARBON 1M 5% 1/4W
R138	1-247-903-00	CARBON 1M 5% 1/4W
R141	1-249-417-11	CARBON 1K 5% 1/4W
R142	1-249-417-11	CARBON 1K 5% 1/4W
R143	1-249-417-11	CARBON 1K 5% 1/4W
R144	1-249-429-11	CARBON 10K 5% 1/4W

Ref.No.	Part No.	Description
R145	1-249-426-11	CARBON 5.6K 5% 1/4W
R147	1-249-429-11	CARBON 10K 5% 1/4W
R148	1-249-427-11	CARBON 6.8K 5% 1/4W
R151	1-249-417-11	(E,EA,AUS)...CARBON 1K 5% 1/4W
R152	1-249-429-11	(E,EA,AUS)...CARBON 10K 5% 1/4W
R153	1-249-423-11	(E,EA,AUS)...CARBON 3.3K 5% 1/4W
R154	1-249-429-11	CARBON 10K 5% 1/4W
R155	1-249-426-11	CARBON 5.6K 5% 1/4W
R157	1-249-417-11	CARBON 1K 5% 1/4W
R158	1-249-417-11	CARBON 1K 5% 1/4W
R159	1-249-438-11	CARBON 56K 5% 1/4W
R160	1-249-417-11	CARBON 1K 5% 1/4W
R161	1-249-437-11	CARBON 47K 5% 1/4W
R162	1-247-897-11	CARBON 560K 5% 1/4W
R163	1-249-429-11	CARBON 10K 5% 1/4W
R164	1-249-430-11	CARBON 12K 5% 1/4W
R165	1-249-405-11	CARBON 100 5% 1/4W
R171	1-249-428-11	CARBON 8.2K 5% 1/4W
R172	1-249-423-11	CARBON 3.3K 5% 1/4W
R173	1-249-435-11	CARBON 33K 5% 1/4W
R174	1-249-438-11	CARBON 56K 5% 1/4W
R175	1-249-435-11	CARBON 33K 5% 1/4W
R176	1-249-441-11	CARBON 100K 5% 1/4W
R177	1-249-435-11	CARBON 33K 5% 1/4W
R178	1-249-438-11	CARBON 56K 5% 1/4W
R179	1-249-427-11	CARBON 6.8K 5% 1/4W
R181	1-249-427-11	CARBON 6.8K 5% 1/4W
R182	1-247-903-00	CARBON 1M 5% 1/4W
R183	1-247-903-00	CARBON 1M 5% 1/4W
R184	1-247-903-00	CARBON 1M 5% 1/4W
R185	1-247-903-00	CARBON 1M 5% 1/4W
R186	1-247-903-00	CARBON 1M 5% 1/4W
R187	1-247-903-00	CARBON 1M 5% 1/4W
R188	1-247-903-00	CARBON 1M 5% 1/4W
R194	1-249-429-11	CARBON 10K 5% 1/4W
R195	1-249-426-11	CARBON 5.6K 5% 1/4W
R197	1-249-429-11	CARBON 10K 5% 1/4W
R198	1-249-427-11	CARBON 6.8K 5% 1/4W
R201	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON 10K 5% 1/4W
R202	1-249-423-11	(US,CND,AEP,UK,WG,IT) ...CARBON 3.3K 5% 1/4W
R203	1-249-405-11	CARBON 100 5% 1/4W
R204	1-249-441-11	CARBON 100K 5% 1/4W
R205	1-249-441-11	CARBON 100K 5% 1/4W
R251	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON 10K 5% 1/4W
R252	1-249-423-11	(US,CND,AEP,UK,WG,IT) ...CARBON 3.3K 5% 1/4W
R301 ⚠	1-212-970-00	FUSIBLE 33 5% 1/2W F
R302 ⚠	1-212-970-00	FUSIBLE 33 5% 1/2W F
R303 ⚠	1-217-469-00	(US)...FUSIBLE 1 5% 1W F
R304	1-249-393-11	(US)...CARBON 10 5% 1/4W
R401	1-249-432-11	CARBON 18K 5% 1/4W
R402	1-247-891-00	CARBON 330K 5% 1/4W
R403	1-249-419-11	CARBON 1.5K 5% 1/4W
R404	1-249-425-11	CARBON 4.7K 5% 1/4W
R405	1-249-441-11	CARBON 100K 5% 1/4W

Note:
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Ref.No.	Part No.	Description			
R408	1-249-429-11	CARBON	10K	5%	1/4W
R411	1-249-429-11	CARBON	10K	5%	1/4W
R412	1-249-441-11	CARBON	100K	5%	1/4W
R413	1-249-429-11	CARBON	10K	5%	1/4W
R414	1-249-411-11	CARBON	330	5%	1/4W
R415	1-249-419-11	CARBON	1.5K	5%	1/4W
R416	1-249-405-11	CARBON	100	5%	1/4W
R421	1-249-429-11	CARBON	10K	5%	1/4W
R422	1-249-415-11	CARBON	680	5%	1/4W
R423	1-249-434-11	CARBON	27K	5%	1/4W
R424	1-249-441-11	CARBON	100K	5%	1/4W
R425	1-249-422-11	CARBON	2.7K	5%	1/4W
R426	1-249-429-11	CARBON	10K	5%	1/4W
R427	1-249-414-11	CARBON	560	5%	1/4W
R451	1-249-432-11	CARBON	18K	5%	1/4W
R452	1-247-891-00	CARBON	330K	5%	1/4W
R453	1-249-419-11	CARBON	1.5K	5%	1/4W
R454	1-249-425-11	CARBON	4.7K	5%	1/4W
R455	1-249-441-11	CARBON	100K	5%	1/4W
R458	1-249-429-11	CARBON	10K	5%	1/4W
R501	1-247-903-00	CARBON	1M	5%	1/4W
R502	1-249-429-11	CARBON	10K	5%	1/4W
R503	1-249-441-11	CARBON	100K	5%	1/4W
R505	1-249-417-11	CARBON	1K	5%	1/4W
R506	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-249-429-11	CARBON	10K	5%	1/4W
R508	1-249-429-11	CARBON	10K	5%	1/4W
R509	1-249-429-11	CARBON	10K	5%	1/4W
R510	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10K	5%	1/4W
R511	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10K	5%	1/4W
R512	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10K	5%	1/4W
R513	1-249-393-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10	5%	1/4W
R515	1-249-409-11	CARBON	220	5%	1/4W
R516	1-249-417-11	CARBON	1K	5%	1/4W
R517	1-249-429-11	CARBON	10K	5%	1/4W
R518	1-249-429-11	CARBON	10K	5%	1/4W
R519	1-249-417-11	CARBON	1K	5%	1/4W
R520	1-249-417-11	CARBON	1K	5%	1/4W
R521	1-249-417-11	CARBON	1K	5%	1/4W
R522	1-249-417-11	CARBON	1K	5%	1/4W
R523	1-249-417-11	CARBON	1K	5%	1/4W
R524	1-249-417-11	CARBON	1K	5%	1/4W
R525	1-249-413-11	CARBON	470	5%	1/4W
R526	1-249-413-11	CARBON	470	5%	1/4W
R527	1-249-413-11	CARBON	470	5%	1/4W
R528	1-249-413-11	CARBON	470	5%	1/4W
R529	1-249-413-11	CARBON	470	5%	1/4W
R530	1-249-413-11	CARBON	470	5%	1/4W
R531	1-249-413-11	CARBON	470	5%	1/4W
R532	1-249-413-11	CARBON	470	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R535	1-249-417-11	CARBON	1K	5%	1/4W
R536	1-249-417-11	CARBON	1K	5%	1/4W

Ref.No.	Part No.	Description			
R537	1-249-417-11	CARBON	1K	5%	1/4W
R538	1-249-429-11	CARBON	10K	5%	1/4W
R539	1-249-429-11	CARBON	10K	5%	1/4W
R541	1-249-423-11	CARBON	3.3K	5%	1/4W
R542	1-249-413-11	CARBON	470	5%	1/4W
R543	1-249-415-11	CARBON	680	5%	1/4W
R544	1-249-416-11	CARBON	820	5%	1/4W
R545	1-249-419-11	CARBON	1.5K	5%	1/4W
R546	1-249-421-11	CARBON	2.2K	5%	1/4W
R547	1-249-425-11	CARBON	4.7K	5%	1/4W
R548	1-249-430-11	CARBON	12K	5%	1/4W
R550	1-249-417-11	CARBON	1K	5%	1/4W
R551	1-249-423-11	CARBON	3.3K	5%	1/4W
R552	1-249-413-11	CARBON	470	5%	1/4W
R553	1-249-415-11	CARBON	680	5%	1/4W
R554	1-249-416-11	CARBON	820	5%	1/4W
R555	1-249-419-11	CARBON	1.5K	5%	1/4W
R556	1-249-421-11	CARBON	2.2K	5%	1/4W
R557	1-249-425-11	CARBON	4.7K	5%	1/4W
R558	1-249-430-11	CARBON	12K	5%	1/4W
R560	1-249-417-11	CARBON	1K	5%	1/4W
R561	1-249-441-11	CARBON	100K	5%	1/4W
R562	1-249-441-11	CARBON	100K	5%	1/4W
R563	1-249-441-11	CARBON	100K	5%	1/4W
R564	1-249-432-11	CARBON	18K	5%	1/4W
R565	1-247-896-11	CARBON	510K	5%	1/4W
R566	1-249-441-11	CARBON	100K	5%	1/4W
R567	1-249-425-11	CARBON	4.7K	5%	1/4W
R568	1-249-425-11	CARBON	4.7K	5%	1/4W
R569	1-249-417-11	CARBON	1K	5%	1/4W
R579	1-249-441-11	CARBON	100K	5%	1/4W
R580	1-249-441-11	CARBON	100K	5%	1/4W
R601	1-249-417-11	(E,EA,AUS)...CARBON	1K	5%	1/4W
R602	1-249-405-11	(E,EA,AUS)...CARBON	100	5%	1/4W
R701 ⚠	1-212-857-00	FUSIBLE	10	5%	1/4W F
R707	1-249-415-11	CARBON	680	5%	1/4W
R708	1-249-422-11	CARBON	2.7K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-417-11	CARBON	1K	5%	1/4W
R712	1-249-417-11	CARBON	1K	5%	1/4W
R713	1-249-417-11	CARBON	1K	5%	1/4W
R721	1-249-429-11	CARBON	10K	5%	1/4W
R722	1-249-430-11	CARBON	12K	5%	1/4W
R723	1-249-441-11	CARBON	100K	5%	1/4W
R724	1-249-405-11	CARBON	100	5%	1/4W
R771	1-249-429-11	CARBON	10K	5%	1/4W
R772	1-249-430-11	CARBON	12K	5%	1/4W
R773	1-249-441-11	CARBON	100K	5%	1/4W
R774	1-249-405-11	CARBON	100	5%	1/4W
R801	1-249-429-11	CARBON	10K	5%	1/4W
R802	1-249-419-11	CARBON	1.5K	5%	1/4W
R803	1-249-438-11	CARBON	56K	5%	1/4W
R804	1-249-414-11	CARBON	560	5%	1/4W
R805	1-249-438-11	CARBON	56K	5%	1/4W
R806	1-249-421-11	CARBON	2.2K	5%	1/4W
R807	1-247-756-11	CARBON	2.2K	5%	1/2W

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Ref.No.	Part No.	Description				
R808	1-249-441-11	CARBON	100K	5%	1/4W	
R810	1-249-438-11	CARBON	56K	5%	1/4W	
R811	1-217-151-00	METAL PLATE	0.22		2W	
R813	1-249-431-11	CARBON	15K	5%	1/4W	
R814	1-249-441-11	CARBON	100K	5%	1/4W	
R815	1-249-417-11	CARBON	1K	5%	1/4W	
R821 ⚠	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R822	1-247-752-11	CARBON	1K	5%	1/2W	
R823	1-247-752-11	CARBON	1K	5%	1/2W	
R824 ⚠	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R825	1-249-441-11	CARBON	100K	5%	1/4W	
R826	1-249-429-11	CARBON	10K	5%	1/4W	
R828	1-249-433-11	CARBON	22K	5%	1/4W	
R829	1-249-433-11	CARBON	22K	5%	1/4W	
R830 ⚠	1-247-744-11	CARBON	270	5%	1/2W	F
R831	1-249-439-11	CARBON	68K	5%	1/4W	
R832	1-249-430-11	CARBON	12K	5%	1/4W	
R833	1-249-429-11	CARBON	10K	5%	1/4W	
R834	1-249-429-11	CARBON	10K	5%	1/4W	
R837	1-249-441-11	CARBON	100K	5%	1/4W	
R851	1-249-429-11	CARBON	10K	5%	1/4W	
R852	1-249-419-11	CARBON	1.5K	5%	1/4W	
R853	1-249-438-11	CARBON	56K	5%	1/4W	
R854	1-249-414-11	CARBON	560	5%	1/4W	
R855	1-249-438-11	CARBON	56K	5%	1/4W	
R856	1-249-421-11	CARBON	2.2K	5%	1/4W	
R857	1-247-756-11	CARBON	2.2K	5%	1/2W	
R858	1-249-441-11	CARBON	100K	5%	1/4W	
R860	1-249-437-11	CARBON	47K	5%	1/4W	
R861	1-217-151-00	METAL PLATE	0.22		2W	
R862 ⚠	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R863	1-249-431-11	CARBON	15K	5%	1/4W	
R864	1-249-441-11	CARBON	100K	5%	1/4W	
R865	1-249-417-11	CARBON	1K	5%	1/4W	
R891 ⚠	1-247-727-11	CARBON	10	5%	1/2W	F
R892 ⚠	1-247-727-11	CARBON	10	5%	1/2W	F
R893	1-249-399-11	CARBON	33	5%	1/4W	
R894	1-249-399-11	CARBON	33	5%	1/4W	
R901	1-249-427-11	CARBON	6.8K	5%	1/4W	
R902	1-249-417-11	CARBON	1K	5%	1/4W	
R903	1-249-429-11	CARBON	10K	5%	1/4W	
R904	1-249-429-11	CARBON	10K	5%	1/4W	
R905	1-249-429-11	CARBON	10K	5%	1/4W	
R906	1-249-425-11	CARBON	4.7K	5%	1/4W	
R907 ⚠	1-212-873-11	FUSIBLE	47	5%	1/4W	F

Ref.No.	Part No.	Description
R908 ⚠	1-202-725-00	(US,CND)...SOLID 3.3M 10% 1/2W
R921	1-249-421-11	CARBON 2.2K 5% 1/4W
R922	1-249-429-11	CARBON 10K 5% 1/4W
R923	1-249-441-11	CARBON 100K 5% 1/4W
R924	1-249-405-11	CARBON 100 5% 1/4W
RB501	1-233-206-11	COMPOSITION CIRCUIT BLOCK (100KX12)
RB502	1-233-206-11	COMPOSITION CIRCUIT BLOCK (100KX12)
RV401	1-238-491-11	RES, VAR, CARBON 500K/500K (DBFB (SAT) LEVEL)
RV402	1-238-459-11	RES, VAR, CARBON 100K (BALANCE)
RV403	1-238-458-11	RES, VAR, CARBON 50K (MIC LEVEL)
RV701	1-238-708-11	RES, VAR, CARBON 10K/100K/100K(VOLUME)
RY801	1-515-533-11	RELAY
RY901	1-515-720-11	RELAY
S501	1-554-303-21	SWITCH, KEY BOARD (POWER)
S502	1-554-303-21	SWITCH, KEY BOARD (PROGRAM FUNCTION)
S503	1-554-303-21	SWITCH, KEY BOARD (SURROUND)
S504	1-554-303-21	SWITCH, KEY BOARD (TUNER)
S505	1-554-303-21	SWITCH, KEY BOARD (CD)
S506	1-554-303-21	SWITCH, KEY BOARD (TAPE)
S507	1-554-303-21	SWITCH, KEY BOARD (AUX/VIDEO)
S508	1-554-303-21	SWITCH, KEY BOARD (PHONO)
S511	1-554-303-21	SWITCH, KEY BOARD (EQUALIZATION)
S512	1-554-303-21	SWITCH, KEY BOARD (DISPLAY)
S513	1-554-303-21	SWITCH, KEY BOARD (MEMORY)
S514	1-554-303-21	SWITCH, KEY BOARD (CURSOR/PRESET EQ)
S515	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL △)
S516	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL ▽)
S517	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL ▷)
S518	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL ◁)
S901 ⚠	1-571-437-11	(E,EA,AUS)...SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR)
TB801	1-536-705-00	TERMINAL BOARD (SP)(SPEAKER)
X501	1-577-358-21	VIBRATOR, CERAMIC (4MHz)

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9-955-830-11

Sony Corporation
Audio Group

English
90E04100-1
Printed in Japan
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Published by Customer Relations and Service Group